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VANCOUVER INTERNATIONAL AIRPORT
PLANNING GROUP

SUMMARY REPORT

NOVEMBER 1987

The Vancouver International Airport Planning Group
A Committee of the
ASIA PACIFIC INITIATIVE
Produced this Report on the
Goals, Ownership and Management Options
For the
Vancouver International Airport

ABOUT THIS REPORT . . .

The Airport Planning Group is a subcommittee of the Asia Pacific Initiative Advisory Committee created by a federal-provincial Memorandum of Understanding signed December 16, 1986.

The Planning Group's objectives were to:

- identify the operational and planning goals for Vancouver International Airport consistent with its position as a gateway between North America and the Asia-Pacific region, and as a vital component of the British Columbia economy;
- identify the benefits and costs of pursuing these goals by instituting a new management structure at the airport, involving provincial, regional or local authorities;
- recommend ownership and management structure options appropriate for realizing the airport's potential; and
- outline the future actions required to implement the recommendations.

This Summary report was distilled from the Airport Planning Group's 151 page main Report. The Summary contains key findings and action recommendations and provides a convenient synopsis which still reflects the spirit of the more comprehensive main Report.

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Readers seeking more detailed information on issues affecting the future of Vancouver International Airport should consult the main Report and its companion Appendices volume.

FOR FURTHER INFORMATION, CONTACT:

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EXECUTIVE SUMMARY

> **"The changing environment in air transport is not just a threat, but an opportunity. With the right attitude and management structure, Vancouver International Airport can exploit the competitive forces in world air transport to its advantage, resulting in a higher level of B.C. economic activity."**
>
> \- Airport Planning Group,
> Transmittal letter, November, 1987

VANCOUVER INTERNATIONAL AIRPORT (VIA): FROM BIPLANES TO BIG BUSINESS

Disdained by Charles Lindberg in 1928 because there was "no airport fit to land on", Vancouver scrambled to salve wounded pride by grooming a Lulu Island field and offering a welcome mat to the brave new world of aviation.

Curiosity gave way to commerce.

Business boomed.

Vancouver International Airport, now the second busiest in Canada, is a vital part of local, regional and national economies. More than eight million passengers and 100,000 tonnes of air freight a year translate into more than 12,000 direct jobs.

The airport is crucial to tourism, now B.C.' number two industry. Businesses require it.

In all, VIA represents an estimated 3.1 per cent of the entire provincial gross domestic product. In British Columbia's resource-based economy, the airport is bigger than fishing, metal or coal mining - and equal to agriculture.

However, for all its success and potential, it is perceived as an airport pretty much in a holding pattern.

Irresistible forces of change now are buffeting the way people move and transport their cargoes through the world's skies.

This presents both the challenge, and the opportunity.

THE WILDLY COMPETITIVE BLUE YONDER

Hard decisions must be taken now to chart Vancouver International Airport's future course, and to secure for it the world-class standing that is within its grasp.

The skies simply are not filled with aircraft idly looking for a picturesque place to land. The competition is fierce, and getting keener. A business-as-usual approach will only guarantee lost business for VIA in tomorrow's global marketplace.

For airports, the future means adapting to a new, competitive environment based on logistical systems of air transport. An airport, as part of a logistical system, facilitates the flow of goods and people into and out of a region; it also can be a transfer point between two distant regions.

In addition, deregulated airlines competing for passengers are routing through newly identified airport 'hubs'. Tourists wishing to see the mountains and shop in a city, might not care whether they pass through Seattle, Calgary or Vancouver.

Seattle, with very innovative, entrepreneurial management, has been successfully competing with Vancouver. Even Toronto, with new long-range aircraft that can now fly non-stop from Tokyo, is becoming a serious competitor for Asia-Pacific traffic that traditionally has been Vancouver's.

The revolution in the air transport industry is also being fuelled by:

- liberal bilateral treaties which grant landing rights in more cities to more international airlines;
- airline mergers and privatization of state-owned carriers;
- free trade, which could see a realignment of east-west routes and increased north-south traffic for some Canadian airports;
- intermodal (port, airport, railway and highway) links; and
- larger, longer-range aircraft and a new generation of high-speed, quieter, fuel-efficient turboprop aircraft;

The competition are already making their moves. But Vancouver has not kept pace with rival airports in winning new international passenger traffic. Seattle, San Francisco and Los Angeles have recorded growth three times greater than Vancouver.

OPPORTUNITIES & PROMISE

The right attitude sees revolution as an opportunity; change as a challenge with far-reaching rewards.

The Airport Planning Group believes that Vancouver International Airport, given the right tools, can build and secure even greater economic growth and prosperity for the entire region. It means operating and using VIA to help attract new industries and services to regional sites far beyond the airport fence.

A 1986 study concluded that an ambitious planning strategy for VIA could, by 1995:

- create more than 400 new jobs;
- add $37 million in cargo traffic; and
- boost annual revenues by $92 million.

Other opportunities include:

- Development of a duty-free Foreign Trade Zone or special enterprise zone using tax incentives, on airport lands. Such zones, which encourage the production of goods that would otherwise be made offshore, can be a major impetus for economic growth, attracting manufacturers and creating jobs.

- Development of new routing systems, such as establishing VIA as the gateway for traffic between Pacific Rim nations and South America or Europe.

- Marketing VIA throughout the world as part of an overall logistical package, possibly taking advantage, for example, of the international demand for B.C. seafood.

- Establishing VIA as an international cargo centre, handling Pacific Rim cargoes destined for North America, South America and Europe.

- Viewing shops at the airport as an important customer service which help to make it attractive to travellers, meaning higher airport earnings and cash retained in the community. Case studies noted that Amsterdam's Schipol airport woos duty-free shoppers from around the world with money-back guarantees if lower prices are found anywhere else.

A LOCAL AUTHORITY: IN CHARGE, IN TOUCH

Achieving the maximum potential economic benefits for the whole region requires a new management structure for Vancouver International Airport. The Minister of Transport, in April, 1987, invited proposals for the ownership and/or operation of federal airports ". . . to provide for increased responsiveness to local commercial and economic initiatives". Transport Canada will remain responsible for safety and security, including air traffic control.

This study examined seven possible management options for VIA, ranging form private sector to federal government operation. The analysis confirmed the findings of previous studies: a Local Authority is the most effective airport management system.

A Local Authority would have its own board of directors, which will set policy and make all final decisions. The Authority would be publicly owned but would not depend on government funding. It's financial viability would depend on the terms of the transfer of airport assets concluded with the federal government.

A Local Authority for VIA would be:

- capable of fast, creative responses to market changes and opportunities;
- accountable to, and controlled by, the region it serves;
- entrepreneurial, market-driven, committed to serving customers;
- able to use the airport to promote broader economic development and regional and community goals;
- free to pursue policies which clearly benefit VIA but cannot be justified as national policy.
- empowered to retain earned surpluses in the region, so they may be used for expansion and to lower user costs, boosting traffic and strengthening the regional economy.

GETTING THERE: THE NEXT STEPS

Making the transition to Local Authority control of the Vancouver International Airport requires the cooperation and goodwill of all those concerned with the development of VIA.

This study outlines the benefits such a change would help to bring about for the entire region.

The Asia Pacific Initiative Advisory Committee is ready to work with the governments involved to establish a process and a timetable for the transfer of management to a Local Authority.

The overriding objective must be to have VIA recognized as a truly world-class airport.

RECOMMENDATIONS

Recommendation Number 1.

A Vancouver International Airport Authority be created by enabling legislation.

Recommendation Number 2.

The VIA be a local public authority with powers to assume management and ownership of VIA. The authority would be:

- a publicly owned corporation;
- locally based and controlled;

- able to collect revenues and make expenditures on its own authority;
- self-financing, with authority to access private capital markets;
- representative of users as well as the local community and business interests;
- structured to be able to reach decisions efficiently;
- operated in a responsible and business-like manner, while recognizing the needs of the community as a whole.

Recommendation Number 3

The VIA Authority adopt a market- and customer-oriented approach and implement an effective marketing program. This means not only analyzing the opportunities created by the changing air transport environment and creating a distinctive market niche, but also responding creatively and quickly and implementing decisions without delay.

Recommendation Number 4

The legislated mandate of the VIA Authority be broad enough to include economic development as well as transportation related undertakings.

Recommendation Number 5

The Asia Pacific Initiative Advisory Committee work with the governments involved to establish the process and timetable for the transfer of management to a local authority.

Asia Pacific Initiative
770 Pacific Blvd. South
Vancouver, British Columbia

Attention:
Mr. E. Nesmith
Chairman

A recent documentary on the Pacific Rim revealed this startling fact: "In 1984, three out of every five jumbo jets in the air were flying the Atlantic. Today, three out of every five are crossing the Pacific." Many of those jets are either flying over or alongside British Columbia. This shift in the pattern of air transportation reflects not only the strong growth of the Pacific Rim economies, but also a more fundamental change in the logistics of air transportation. Both of these have important implications for Vancouver International Airport (VIA).

While the Pacific Rim freight and passenger air transportation markets are among the fastest growing in the world, VIA is faced with the real possibility of losing its stature as an air transport gateway to the Pacific Rim. With the implementation of North American deregulation and an increasingly open skies policy across the oceans, carriers are channeling their growth to other Pacific Coast centres, such as Seattle. For example, from 1982-85, total international traffic growth (including transborder) was 21% at Seattle, 25% at San Francisco, 26% at Los Angeles and 8% at Vancouver. This traffic is especially important to Vancouver, as it relies more heavily on international traffic than do the U.S. Pacific gateways. International traffic comprises between 8%

and 16% of total traffic at Seattle, San Francisco and Los Angeles, versus over 30% at Vancouver.

The threat to VIA is not just to the south. Although Vancouver is at present the only Canadian gateway to the Orient, foreign carriers have made clear their preference to serve Toronto and new airplane technology makes overflying Vancouver to serve Eastern Canada and the U.S.A. possible.

The implications are obvious. To maintain its existing market share, much less to grow with the new opportunities, VIA must adopt a more aggressive strategy. As is happening throughout the world in response to the new competitive air transport environment, VIA must focus its attention on marketing and working with its customers (and potential customers) to serve their needs. This is crucial if the airport is to prevent a fall in traffic and grow to become a truly world class airport. To implement this new orientation, a fundamental review of mandate and management systems is required.

The changes ahead for VIA affect not just the immediate airport users, but the community as a whole. The airport accounts for nearly 13,000 direct jobs, and an additional 17,000 indirect and induced jobs in B.C. This amounts to 3.1% of total provincial gross domestic product, a share greater than fishing, metal or coal mining and equal to agriculture. The demise of our airport would be felt through the B.C. economy. On the other hand, the airport can be viewed as a powerful engine of economic growth. A 1986 study concluded an enhanced planning strategy could, by 1995, increase passengers by 185,000, add $37 million in cargo and $92 million in annual revenue and create over 400 new jobs. The changing environment in air transport is not just a threat, but an opportunity. With the right attitude and management structure, VIA can exploit the competitive forces in world air transport to its advantage, resulting in a higher level of B.C. economic activity.

The Air Transport Revolution

Air Transportation is in the throes of a major upheaval. This upheaval began roughly ten years ago with U.S. airline deregulation and the negotiation of several "liberal" bilateral treaties. It will continue for several more years as the industry continues to adjust to the new freedoms and competitive forces and as potential new developments, such as free trade in North America, make themselves felt. These changes are occurring on a global scale, and are dramatically altering the routing patterns of air carriers. As routes shift, airports and the communities they serve rise and fall in their fortunes. Vancouver International Airport will be greatly affected by these forces. Exciting and important challenges lie ahead.

As air transportation makes the transition from regulation to the open skies of competition, two distinct paths to the future can be pursued. One path will see the new environment as a great commercial and social opportunity. This path will take the challenge of the new regime and use it to develop the airport, thereby acting as a vital tool for fostering general economic development in the Greater Vancouver region. This path is active and involves controlling one's destiny.

The alternative path is passive. This "business-as-usual" approach would witness a loss of traffic and an erosion of some of Vancouver's current economic base as other (active) airports effect strategic shifts in traffic flows and capture the economic activity tied to that traffic. This is not a criticism of the airport managers, but a recognition that the current mandate and administrative structure is seriously deficient. Just tinkering with current airport policy will necessarily result in pursuing this passive path. Other airports have already chosen the active path and are well underway with their plans -- plans that necessarily will be to Vancouver's detriment.

Responding to the Challenge

The Governments of Canada and British Columbia have responded to the challenge. This report is a preliminary step in a process to identify strategies that Vancouver International Airport can pursue to exploit these new opportunities. It examines the history of the airport and the genesis of the Airport Planning Group, explores the changes occurring in air transport markets and the implications of these changes for the airport and identifies economic development opportunities. The report then examines management options, evaluating their ability to take advantage of the opportunities created, makes a series of recommendations and, finally, sets out a course of future action.

The Report of the Vancouver International Airport Planning Group is submitted in three parts: a Summary Report, the Report and Appendices.

The Airport Planning Group would like to take this opportunity to thank and acknowledge the contribution of the many individuals and organizations that assisted it in its work, particularly Transport Canada and the B.C. Ministry of Economic Development. Special appreciation is extended to those involved in preparation of the report, including Project Manager Russell Anthony; Researcher David Dale; Dr. Michael Tretheway (Chapter 3); Tony Seguss, Sylvie Lefebvre and Dugal Smith of Price Waterhouse (Chapter 4,5 and 7); Gordon Hamilton of Sypher:Meuller International (Chapter 6) and Lorraine Vinish and Kim Sheridan who produced the final copy.

The conclusions and recommendations are those of the Airport Planning Group and we commend them for your consideration.

Respectfully submitted,

VANCOUVER INTERNATIONAL AIRPORT
PLANNING GROUP

Graham Clarke, Chairman

Jim Cosh

Stuart Hodgson

Rhys Eyton

SUMMARY REPORT

Chapter 1. An Introduction

- On December 16, 1986, the governments of Canada and British Columbia signed a Memorandum of Understanding promoting the development of British Columbia as Canada's Pacific centre for trade, commerce and travel.

- The Airport Planning Group, a subcommittee of the Asia Pacific Initiative Advisory Council created by the Memorandum of Understanding, was mandated to identify the operational and planning goals for the Vancouver International Airport (VIA) and make recommendations designed to realize the airport's potential as an international gateway to the Pacific Rim and a world-class facility.

- On April 8, 1987, the Federal Minister of Transport announced he is prepared to receive proposals for the transfer of airport ownership and/or operation. The Airport Planning Group was asked by the Asia Pacific Initiative Advisory Committee to advise whether such an initiative should be undertaken with respect to VIA.

Chapter 2. The Vancouver International Airport

- Vancouver International Airport presently consists of:

    - 1480 hectares (with a total of 371 hectares vacant);
    - two terminal buildings (the Main Terminal and the South Terminal);

    - 23 aircraft gates;

    - two runways, a main runway and a shorter, crosswind runway;

- a seaplane harbour on the south side of the airport; and

- various hangar facilities.

- The main air terminal building was completed in 1968 and has undergone major expansion to increase its floor space to 67,765 square metres on four levels.

- South Terminal Building was constructed in 1950 and is the terminus for the small commuter airlines and general aviation, operating primarily under Visual Flight Rules. The building itself is a two-storey, rectangular structure with a total floorspace of 2,991 square metres divided into three bays.

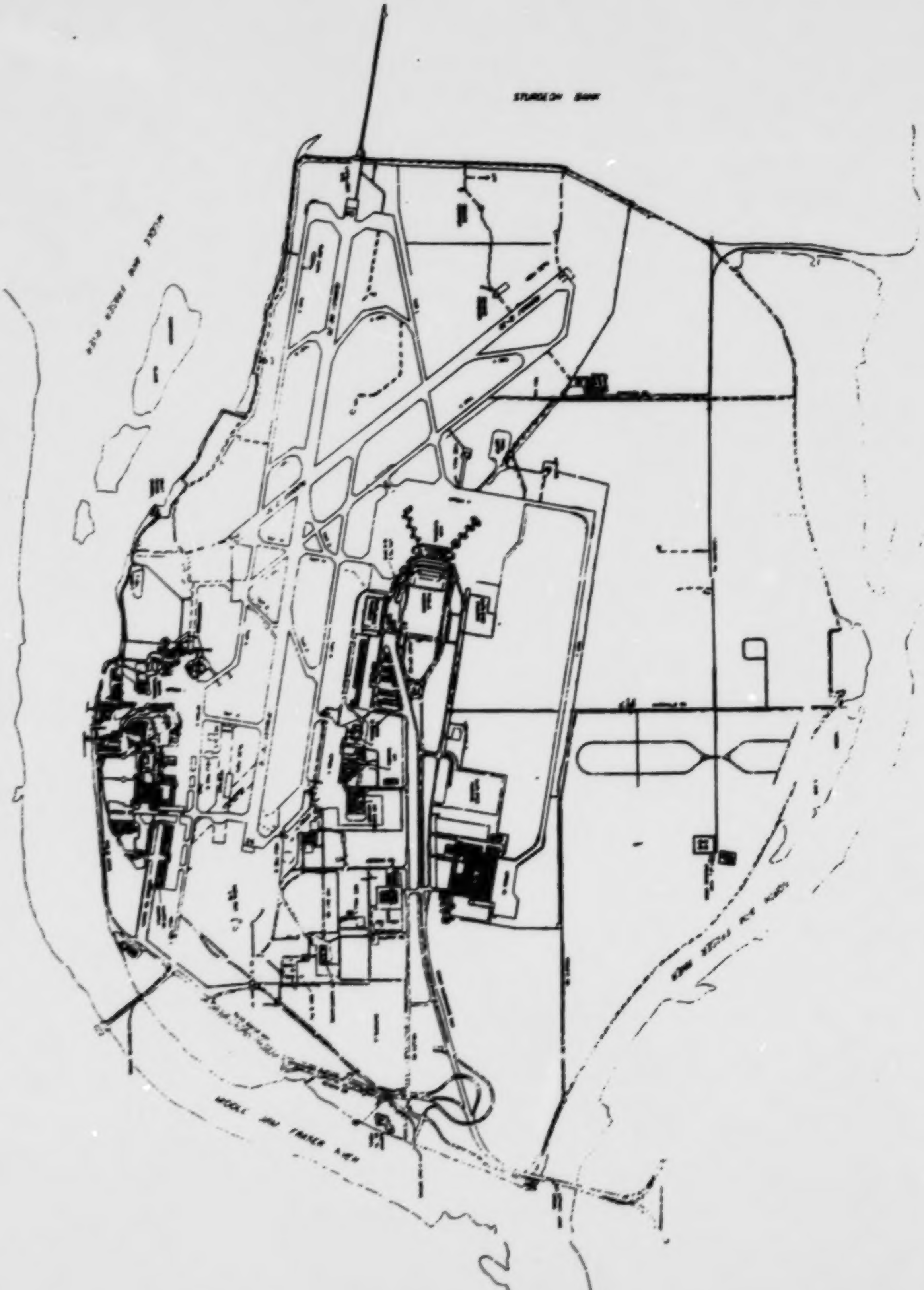
- A detailed map showing the airport and its main features follows.

- The future plans for the VIA are set out in the Comprehensive Land Use Plan in the 1980 approved Master Plan, updated by a 1986 Land Use Plan.

- The Lower Mainland contains a number of local airports in addition to VIA, namely:

  Abbotsford
  Boundary Bay
  Chilliwack
  Delta Air Park
  Fort Langley
  Hyack Airport
  Langley
  Pitt Meadows
  Vancouver Harbour

The airports at Squamish and Pemberton are also affected by VIA.


STURGEON BANK
MIDDLE ARM FRASER RIVER
NORTH ARM FRASER RIVER
MIDDLE ARM FRASER RIVER

These smaller airports are used for general aviation involving light aircraft operating primarily under Visual Flight Rules.

Chapter 3: The Challenge Part One: The Air Transport Revolution

Logistics

- An airport, as part of a broader logistical system, facilitates the efficient flow of goods and people into and out of a region. It can also act as a transfer node (or an intransit node) between two regions. An airport is also an intermodal facility, transferring passengers or freight from one mode of transport, air, to another, for example sea or trucking.

- Forces exist that will set up new logistical systems that compete with Vancouver. VIA's future as Canada's Pacific Gateway depends on the airport developing new routing systems, such as establishing itself as the link between the Pacific Rim and South America, Europe, Central America and points in the U.S.A. Many of these new routing patterns are likely to be opposed and, hence, VIA must become an active advocate in international route negotiations.

- Vancouver needs to develop and put into action ideas for new systems that will retain existing traffic and develop new opportunities. An entire logistical package has to be sold to the international markets, and not simply the airport alone. The marketing challenge is to find and develop niches to exploit. Some of the actions which VIA needs to undertake cannot be done in a national airport system but must be specifically created for the unique Vancouver situation.

The Economic and Policy Environment.

Trends in Air Traffic. There has been tremendous long-term growth in Canadian air traffic. From virtually a non-existent industry in 1950, Canadian air traffic has grown to 22 billion revenue passenger miles flown in 1984. Air cargo has grown at about the same rate, with 1.2 billion pounds moved in 1984.

Internationally, air cargo has grown at a faster rate than passenger travel. While Europe and North America currently dominate the air freight market, these markets have matured and currently have the lowest annual growth rates (8.7% and 5.2% respectively). The Asia-Pacific market has the highest growth at 19.9% per year, followed by Africa (13.9%), the Middle East (11.5%), and Latin America(10.9%).

Trends in Technology. Airports are directly affected by changes in aircraft technology. On the horizon in the early 1990s is the new, advanced turbo-prop aircraft which will start to phase out some jet aircraft. These aircraft will significantly reduce the noise impact on the surrounding community and their lower operating costs will stimulate air travel demand.

Another change expected in the 1990s is introduction of aircraft with 600-700 seats, primarily variants of the Boeing 747. These aircraft could strain existing groundside facilities.

Deregulation of the Airlines. Deregulation in the U.S. has caused a shift towards hub-and-spoke networks by the carriers. This implies greater traffic and peaking problems at hub airports such as Vancouver. A related issue, airline mergers, has resulted in the consolidation of operations of former competitors, resulting in reduced activity at certain airports.

- Privatization of the Airlines. Worldwide there has been a move towards the privatization of air carriers. This is predicated on the belief that an aggregate shift in economic benefits will develop from a privately owned, market-oriented industry which maximizes producer efficiency and consumer welfare. Privatization and deregulation are often closely related.

- Free Trade. Canada lies on the edge of an established hub and spoke network in the United States. It is conceivable that in a comprehensive free trade system (beyond that currently under discussion) Canadian cities could be served via U.S. hubs and some American cities via Canada. The resulting reduction of non-stop east-west links in Canada would be offset to some extent by increased north-south traffic.

- International Air Bilaterals. It is the international bilateral agreement which defines the terms under which international commercial air transportation is conducted. There can only be an increase in Pacific Rim air transportation and Pacific Rim trade through VIA if there is an expansion in the number of foreign carriers serving the airport. This will require the federal government to negotiate new bilateral agreements. It may also require VIA to adopt a position contrary to the interests of other airports and Canadian air carriers.

- When (non air transport) firms choose a location for offices and industry, they are strongly influenced by the availability of frequent and direct air service. If Vancouver only offers indirect connections (perhaps via congested and expensive Narita airport in Tokyo) and these are only offered a few days a week, then they will locate elsewhere. The importance of having direct, frequent air service cannot be stressed enough. The location decisions of multinational and international trading firms is heavily influenced by it. VIA could be left in the backwaters of the growing Pacific Rim economy if it fails to take an active role in soliciting new airline services. The North American airports are now in a competitive mode, and active airport marketing groups will capture the new traffic and thus, the Pacific Rim oriented economic development.

- Air Traffic. On a worldwide basis, there has been a dramatic increase in both cargo and passenger air traffic. Over the ten-year period 1976-1986, the amount of international freight tonnes carried increased an average of 7% per year. Over the same period, world passenger traffic increased an average of 5%.

- The current worldwide trends in air transportation place North America at the strategic forefront. Exciting changes and shifts in current routing patterns are affording North American airports new opportunities to explore and develop.

- Pacific Rim traffic is growing faster than any other market. Vancouver is in a position to capture some of this growth, thereby ensuring that VIA remains competitive in the North American logistical system.

- Vancouver is currently positioned as Canada's major Pacific regional hub and as Canada's port of entry for Pacific flights. However, Vancouver's record over the last two decades at generating traffic has not been good, having been relatively stable since 1980, after increasing slightly between 1970 and 1980. As of 1985, Vancouver's share of Canadian passenger traffic stood at 23 percent and share of cargo traffic stood at 20 percent.

- At present, only two of the top ten cargo carriers (JAL and British Airways) offer regular service to VIA and only three of the top ten airlines in terms of passengers or revenue passenger kilometers (JAL, British Airways and KLM) serve VIA.

- Vancouver's failure to substantially increase its international traffic share can be illustrated by how the airport has fared in relation to other Pacific coast airports. Vancouver had only an 8% growth in international passenger traffic during the period 1982-85, compared to increases of 21 percent in Seattle, 26 percent in Los Angeles and 25 percent in San Francisco. See table following.

- Vancouver is not only showing smaller increases in international traffic than its Pacific competitors, but is more dependent on international traffic than its U.S. competitors. Whereas international traffic comprises between 8 and 16 percent of total traffic for the Pacific U.S. airports, it makes up about one-third of Vancouver's total traffic.

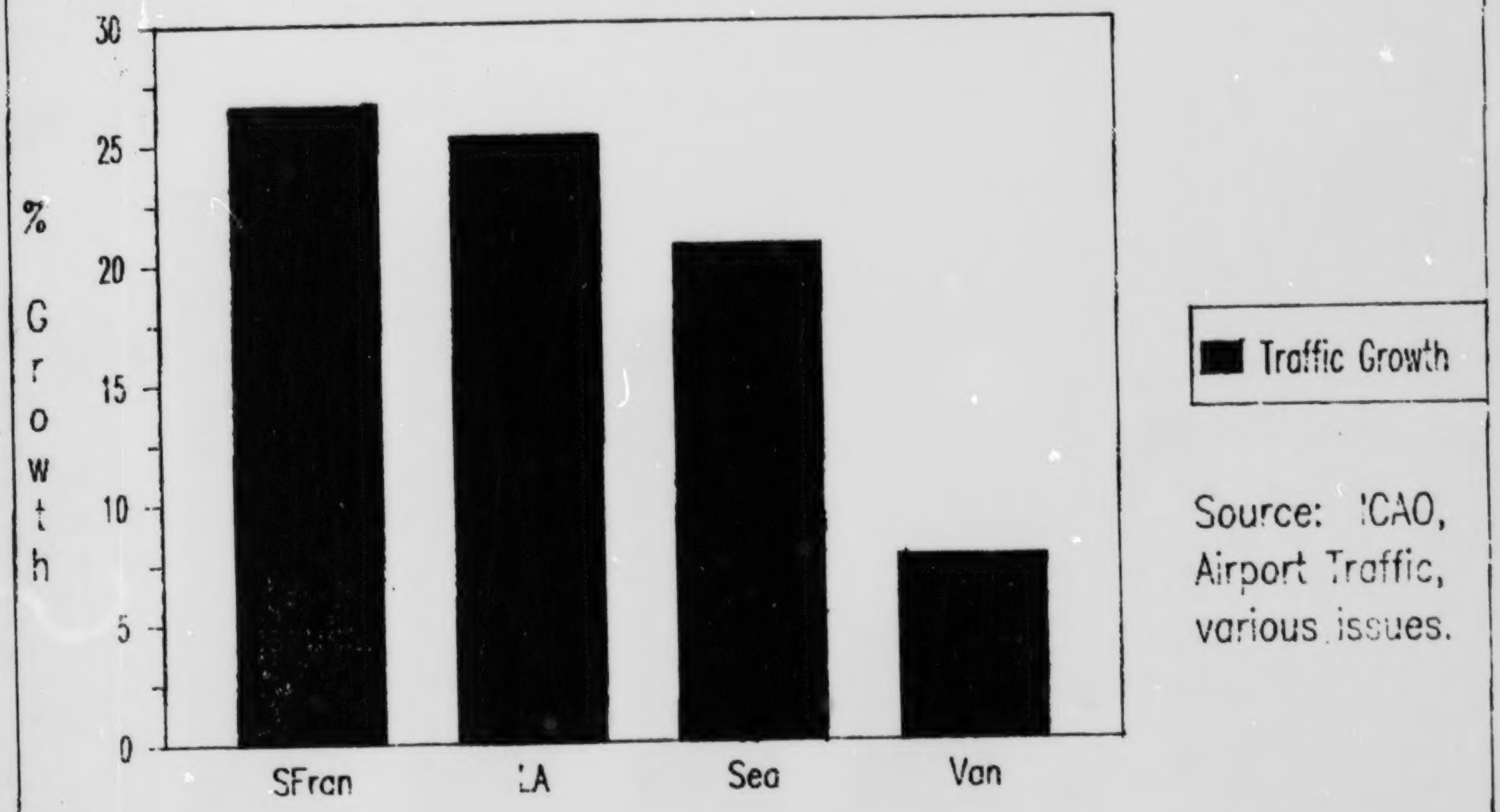
- Choice of airport. A more market- and customer-oriented approach is required, incorporating all major factors that influence airport choice, including:

a) Regulatory constraints
    - bilateral air treaties
    - customs
    - taxation policies

b) Airport facilities
    - passenger terminal building
    - gate space and facilities
    - duty free shopping

International Passenger Changes

At Major Pacific Airports (1982 -- 1985)



Source: ICAO, Airport Traffic, various issues.

- airport office centres
- transfer times
- traffic congestion
- ground traffic
- cargo handling equipment
- maintenance
- container availability
- ground handling service

c) Cost of doing business

- fuel costs
- crew layover costs
- maintenance costs
- land and ground fees
- customs fees and taxes

d) Off-Airport factors

- attractiveness of community
- hotels
- meals
- cultural diversity
- local tourist attractions
- links to out-of-town attractions
- shopping
- city amenities

The Actions VIA Must Take. Everything that VIA can do can also be done by other airports. While strategically located, VIA has few attributes which give it a unique position in the minds of shippers or travellers. Thus, VIA must compete.

- to retain its existing stature and to exploit new opportunities, VIA must first and foremost adopt an entrepreneurial, market- and customer-oriented attitude. This attitude will see the airport as part of a broader set of freight and passenger logistical systems. It will recognize that competing systems exist and will continue to arise. The new attitude will understand that it is the needs of the ultimate customers which must be met, and that customers have increasing numbers of choices before them and are increasingly sophisticated in their analysis of choices. Customers' needs will change, so an active and responsive system is needed.

- VIA will need to increase the importance of its marketing function. The marketing team must have an attitude of cooperating with customers and endeavoring to find out what their needs are. The marketing group will need to be entrepreneurial. It must not be constrained by a bureaucratic structure and corporate philosophy. It will need to be responsive, with the ability to make quick decisions and put them immediately into action. The marketing team must be willing to visit with, and able to talk the language of, the airport's immediate as well as ultimate users. Since many of the ultimate users are widely dispersed, the airport team may need to serve in the role of initiator and organizer. Just as the CP railway irrigated the desert of Alberta in order to create rail traffic, the VIA team may need to think "outside the lines" in order to create and nurture new markets.

Conclusions

1. Air transport is in the throes of major strategic shifts;

2. These shifts threaten Vancouver's traffic base, especially if a business-as-usual approach is adopted;

3. These shifts also create opportunities which VIA could exploit to its advantage;

4. Pacific Rim, Pacific-Europe and Pacific-South America traffic is likely to experience continued strong growth;

5. Air freight is likely to experience continued strong growth;

6. VIA is not likely to serve as a major hub in North American traffic, nor as a hub for overnight courier operations. It can, however, act as a significant "domestic" hub for Canadian traffic.

7. Vancouver International Airport is falling behind the west coast U.S. airports and Toronto in terms of growth in international passenger traffic. This trend will only get worse as foreign countries negotiate access to Toronto for their carriers and as U.S. and foreign carriers develop greater access south of the Canadian border.

8. VIA can be a major gateway for Pacific Rim traffic, whether that traffic is destined for Canada or connecting to Europe, South America or the U.S. In the latter case, VIA would serve an in-transit role.

9. VIA can act as an international cargo centre, especially with respect to growing Pacific Rim trade, whether destined for North America, South America or Europe.

10. The integration of the airport with a free trade zone, strategically located on the major air route from Asia, would enhance Vancouver's role in international cargo.

11. VIA can act as a gateway to many attractive tourist destinations, such as the Rockies, Alaska, the Yukon and Western Arctic as well as more local destinations, such as Whistler and other B.C. resorts.

12. Participation in the opportunities created by the new forces in the market mandates a new, active, entrepreneurial approach to marketing, even if the goal is simply to maintain current traffic volumes.

13. To increase its market share and effectively compete with the marketing programs of its westcoast competitors, an aggressive marketing program is required which will not only analyze the opportunities created by the changing air transport environment and create a distinctive market niche, but also be able to respond quickly and creatively to market opportunities.

14. VIA must compete. To do so it must develop an entrepreneurial, market- and customer-oriented approach. This means an ability to make quick decisions and implement them immediately.

15. To complement its marketing programs, VIA must develop a strong and independent voice to influence government policy in negotiation of bilateral agreements.

16. Time is of the essence. The air transportation industry is in flux. Once new logistical systems are put in place and routes established it will be much more difficult for VIA to establish itself as a world-class airport. The time for decisive action is now.

CHAPTER 4. THE CHALLENGE PART TWO: AIRPORTS AND ECONOMIC DEVELOPMENT

- In 1986, Vancouver International Airport handled 8.5 million passengers and over 100,000 tons of cargo making it the second busiest airport in Canada.

- VIA is an important component of British Columbia's transportation infrastructure and as such, it has an important impact on the B.C. economy.

Employment (person years)	
- Direct	12,615
- Indirect	7,076
- Induced	8,996
	28,687
Gross Revenue	$2.4 billion
Gross Domestic Product	$1.4 billion
Capital Investment	
- Historic	$310 million
- Current Replacement	$1,526 million

- VIA represents 3.1% of British Columbia's G.D.P., an impact greater than fishing, metal or coal mining and equal to agriculture.

- More than a necessary part of a region's transportation infrastructure, airports can play a positive and significant role in economic development. An airport should be considered a local industry which can, if fully developed, be a significant generator of local income and employment, and a key component of the local economic base.

- Until recently, Transport Canada has operated its airports as an essential utility or public service, with a strong emphasis on operations issues and cost reduction. Given Transport Canada's mandate, this is perhaps understandable. The alternate approach, while not neglecting operating and cost factors, emphasizes the revenue and employment potential of an airport, and seeks to maximize these prospects to the ultimate benefit of the community. This approach requires a more regionally sensitive and broader based definition of the role of airports in a community and is usually defined as the "local authority" approach.

- The initiatives an airport can take, its primary impacts and their economic and social effects can be summarized as follows:

INITIATIVES	PRIMARY IMPACT	ECONOMIC AND SOCIAL EFFECTS
. More aggressive marketing of air services, facilities.	. Increased passenger traffic . New direct services. . Increased cargo volumes. . Increased tourism.	. Increased employment. . Increased revenues. . Congestion
. More aggressive marketing of industrial development	. Attraction of new services/ industries to the region.	. Increased employment. . Increased spending. . Congestion
. More concessions, enhanced concessions	. Increased concession revenues.	. Employment . Foreign exchange
. Local financial control	. Retention of surpluses in B.C. . Lower costs to users. . Freedom to raise money for capital projects.	. Enhanced local economic strength.

- A series of case studies illustrate the initiatives that other airports have taken to stimulate economic development, enhance concession revenue and promote traffic growth.

- VIA is a gateway and hub for economic development activity throughout B.C., particularly the tour/hotel industry, commercial travellers and high technology industries.

- Foreign trade zones and special enterprise zones must be considered as a major impetus for economic development.

Conclusions

1. VIA plays an important role in the development of local economic activity, both for airport-related operations and as a vital link with other sectors of the B.C. economy, notably as a "gateway" for tourism and providing easy access for people and goods moving into or out of the province.

2. The airport plays an important role in the distribution network of the province through intermodal links with sea and land transport.

3. While one cannot assume that economic development opportunities seized in one jurisdiction will apply in another, there is nothing that would suggest the initiatives or opportunities developed in the case studies and elsewhere are not also possible in Vancouver. On the contrary, we are satisfied that many significant opportunities do exist.

4. There is significant potential for VIA to enhance its position as an economic generator, whether it be through increased concession revenues, industrial development, fee structures to promote traffic beneficial to economic development, or development of a Foreign Trade Zone on site.

5. To attain its potential, VIA will have to be operated and managed as an economic development tool and not merely a component, albeit an important one, of the region's transportation infrastructure. While the specific initiatives can be determined later, there is a need for a fundamental re-orientation of management attitude and mandate to capture the full economic development potential of the airport.

CHAPTER 5. RESPONDING TO THE CHALLENGE: MANAGEMENT OPTIONS

- The previous studies, including work done for both the federal and provincial governments, and the work undertaken for the Airport Planning Group by Price Waterhouse, has identified seven organization structures which, in addition to the status quo, could be used to manage the Vancouver Airport System. These are:

    - Modified Transport Canada
    - Federal Crown Corporation
    - Federal Airport Commission
    - Provincial Crown Corporation
    - Regional/Municipal body
    - Local Airport Authority
    - Private sector ownership

- To assist in the analysis of these options, six major management criteria were developed, namely:

    - Market Assessment
    - Economic Development
    - Financial Viability
    - Relationship with three levels of Government
    - Productivity
    - Community Support

- To evaluate the management options, the advantages and disadvantages of each were evaluated against the criteria. In order to rate each option, a factor of 1 (the worst level) to 5 (the best level) was assigned to each criteria. The results of the analysis is presented in the table following with the ranking of each option against each criteria indicated in parenthesis, and the total score tabulated at the end of the table.

- The analysis confirms what has been demonstrated globally, that is, a local authority is the most effective airport management system. This is the same conclusion reached by the other studies, both within and outside government, undertaken to review management options in Canada.

Conclusions:

1. The local authority concept is the most attractive management option.

2. The existing federal system, while competently administered and effective within its mandate, is not structured to respond to the needs of a fiercely competitive market. The Canadian federal system serves many constituencies and is unlikely to pursue programs which clearly benefit VIA but cannot be justified as national policy.

3. Local control of airport management will be more responsive and better able to complement and initiate other local activities, such as development of a free trade zone, tourism and other Pacific Rim marketing initiatives.

4. A local structure will allow key employees to develop within the VIA system and stay on to guide future programs

TABLE 2

ANALYSIS OF MANAGEMENT OPTIONS

	MODIFIED TRANSPORT CANADA	FEDERAL CROWN CORPORATION	FEDERAL AIRPORT COMMISSION	PROVINCIAL CROWN CORPORATION	REGIONAL/MUNICIPAL COMMISSION	PRIVATE SECTOR	LOCAL AIRPORT AUTHORITY
DEFINITION	. A streamlined, decentralized department operation	. Corporation established through legislation - under federal control	. Established through legislation . Retain federal ownership and control	. Requires transfer from Canada to B.C. and operates under provincial legislation	. Requires transfer from Canada to GVRD	. Owned and operated by private sector (sold to highest bidder)	. Autonomous local entity which operates on a breakeven basis
MARKET ASSESSMENT . Reaction to competitive forces	. Limited responsiveness (1)	. Responsive (3)	. Responsive (3)	. Responsive (3)	. Moderately responsive (2)	. Extremely responsive (5)	. Very responsive (4)
. Marketing strategies	. Limited ability to identify strategies and slow to implement them (1)	. May identify adequate strategies but difficult to move quickly (3)	. May identify adequate strategies but difficult to move quickly (3)	. May identify adequate strategies but difficult to move quickly (3)	. Limited ability to identify strategies but difficult to move quickly (2)	. Identify and implement very quickly (5)	. Identify and implement quickly (4)
. Planning element	. Limited - driven by engineering considerations (1)	. Market driven but limited authority (3)	. Market driven but limited authority (3)	. Market driven but limited authority (3)	. Limited (2)	. Market driven and complete authority (5)	. Market driven and complete authority but community perspective represented on board (4)
. Revenue generation	. Some marketing focus but may be slow to respond (1)	. Marketing focus and quick response (3)	. Marketing focus and quick response (3)	. Marketing focus and quick response (3)	. Limited marketing focus quick response (2)	. Marketing focus and quick response (5)	. Marketing focus and good response (4)
. Level of entrepreneurship	. Rewards status quo (1)	. Risk taking not encouraged (2)	. Risk taking not encouraged (2)	. Risk taking not encouraged (2)	. Risk taking not encouraged (2)	. Very high - risk taking encouraged and rewarded (5)	. High - risk taking encouraged (4)
. Decision-making process	. Limited change/not responsive (1)	. Bureaucratic (2)	. Bureaucratic (2)	. Bureaucratic (2)	. Bureaucratic (2)	. Quick and efficient (5)	. Quick and efficient but community perspective represented on board (4)
ECONOMIC DEVELOPMENT . Level of local involvement	. Limited due to national focus (2)	. Local input but still a Federal focus (2)	. Local input but still a Federal focus (2)	. Local input but a Provincial focus (3)	. High local focus (5)	. Limited concern of public good and overall economic development (1)	. High local focus (5)
. Responsiveness to opportunities	. National focus and limited ability to consider and respond to local economic impacts (2)	. National focus and limited ability to consider and respond to local economic impacts (2)	. National focus and limited ability to consider and respond to local economic impacts (2)	. Provincial focus and limited ability to consider and respond to local economic impacts (2)	. Local focus but limited ability to respond to local economic impacts (3)	. Linked to profits - limited (2)	. Local focus - will consider local impacts (5)
. Pricing policy	. Cross-subsidization and high rates (1)	. Cross-subsidization and high rates (1)	. Cross-subsidization and high rates (1)	. Cross-subsidization and high rates (1)	. Cross-subsidization within municipal budgets (2)	. Could lead to unregulated pricing (2)	. Fair pricing (mandate to breakeven) (5)
FINANCIAL VIABILITY . Ability to raise capital	. Non-existent (1)	. Fairly limited (3)	. Fairly limited (3)	. Fairly limited (3)	. Limited (2)	. Equity and bond (5)	. Bond issues (4)
. Capital planning process	. Fairly low accountability (1)	. Better accountability (3)	. Better accountability (3)	. Better accountability (3)	. Moderate accountability (2)	. Very accountable (5)	. Much better accountability (4)
. Purchase of assets	. Directly linked to federal purse and local needs (1)	. Linked to federal purse and local needs (2)	. Linked to federal purse and local needs (2)	. Linked to provincial government and local needs (2)	. Linked to municipal government (1)	. Linked to profits (4)	. Linked to local needs and financial viability (5)
. Financial accountability	. Fairly limited - part of government budgeting process (1)	. Some accountability but remains linked to government budgeting process (3)	. Some accountability but remains linked to government budgeting process (3)	. Some accountability but remains linked to government budgeting process (3)	. Some accountability but remains linked to municipal budgeting process (2)	. Very good - accountable to owners/shareholders (5)	. Mandate to break even and accountable to board of directors (4)
. Cost controls	. Fairly limited -	. Average - still	. Average - still	Average - still	Modest - still	. Very good -	Good - must be at

PRO[illegible]TY . La[illegible]	. [illegible] que [illegible]	. [illegible]cess[illegible] to an[illegible] good relations (3)	. Succe[illegible] [illegible]ights [illegible] good relations (3)	. Suc[illegible] righ[illegible] good relations (3)	. [illegible] ser ri[illegible] and good relations (3)	. [illegible] succes[illegible] ghts but labour climate could be adversarial (3)	. [illegible]egoti[illegible] labour contracts . No successor rights . Good relations (4)
. Complexity of organization	. Largely unresponsive bureaucratic system (1)	. Bureaucratic (2)	. Bureaucratic (2)	. Bureaucratic (2)	. Bureaucratic (2)	. Very responsive (5)	. Private se[illegible]or oriented and very responsive (5)
. Complexity of contract procedures	. Very complex government procedures (1)	. Flexible but federal control (2)	. Flexible but federal control (2)	. Flexible but provincial government control (2)	. Municipal control and procedure (2)	. Very flexible (5)	. Flexible (4)
. Staff incentive schemes	. Not directly linked to performance and some political appointments (1)	. Not always linked to performance and some political appointments at senior levels (3)	. Not always linked to performance and some political appointments at senior levels (3)	. Not always linked to performance and some political appointments at senior levels (3)	. Not directly linked to performance and some political appointments at senior levels (2)	. Linked to performance (5)	. Linked to performance and limited opportunity for political appointments (4)
. Efficiency	. Limited potential to encourage and reward efficiency (1)	. Some potential to encourage and reward efficiency (3)	. Some potential to encourage and reward efficiency (3)	. Some potential to encourage and reward efficiency (3)	. Limited potential to encourage and reward efficiency (1)	. Potential for higher efficiency - linked to profits (5)	. Commercialization - will likely improve efficiency (4)
RELATIONSHIP WITH THREE GOVERNMENT LEVELS	. Understands need to comply willingly to regulations (4)	. Understands need to comply willingly to regulations (4)	. Understands need to comply willingly to regulations (4)	. Understands need to comply willingly to regulations (4)	. Understands need to comply willingly to regulations (4)	. Could be adversarial (2)	. Understands need to comply willingly to regulations (4)
COMMUNITY SUPPORT	. Limited (2)	. Limited (2)	. Limited (3)	. Limited (2)	. Very limited (1)	. Open to criticism if viewed as subsidies to private sector (1)	. Very strong (5)
SCORE							
. MARKET ASSESSMENT	1.0	2.7	2.7	2.7	2.0	5.0	4.0
. ECONOMIC DEVELOPMENT	1.7	1.7	1.7	2.0	3.3	1.7	5.0
. FINANCIAL VIABILITY	1.0	2.8	2.8	2.8	2.0	4.8	4.2
. RELATIONSHIP GOV'T	4.0	4.0	4.0	4.0	4.0	2.0	4.0
. PRODUCTIVITY	1.4	2.6	2.6	2.6	2.0	4.6	4.2
. COMMUNITY	2.0	2.0	3.0	2.0	1.0	1.0	5.0
TOTAL SCORE	11.1	15.8	16.8	16.1	14.3	19.1	26.4

NOTE: Numbers in parenthesis indicate the relative score of each option against each criterion, 1 being the "worst" score and 5 being the "best" score. Equal weight is given to each major heading.

once they have mastered their areas and built valuable community contacts.

5. The local management organization should be free from direct political direction and fiscal policies. A local airport authority must be able to collect its own revenues and make its own spending decisions based on sound business principles. The local authority would have the mandate to operate on a break-even basis, and as such would be required to obtain financing on its own, most likely through the long term bond market in Canada. Canadians should expect the same high level of performance from their airports under a local authority as has been the experience elsewhere.

6. The airport authority should be structured to allow input of affected parties. This will include direct airport users (such as air carriers) as well as ultimate users (such as shippers, distributors, tour participants). The importance of the airport to the local economy and environment also requires local community representation.

CHAPTER 6: THE AIRPORT AUTHORITY CONCEPT

- All the recently completed studies on airport management, including government studies, have recommended the local authority structure.

- Each airport authority tends to be uniquely structured at the detailed level to best suit local conditions, but the general pattern is a structure which:

  - isolates the airport or airports from direct political direction.

- provides the airport or airports with access to private capital markets, and with a financial structure to permit the issue of debt.
- mandates the airport to operate efficiently and on a businesslike manner, with no access to municipal or provincial funds.
- provides the executive of the airport with sufficient authority to manage effectively.
- reserves policy and budget decisions to a board of directors.
- recognizes the interdependence of the airport and its users.
- has full title to and responsibility for airport property and operations.
- is required to pay property taxes to the municipality for at least part of its facilities.

- For the Vancouver International Airport Authority, the following criteria are proposed for the design of the Board of Directors:

The mandate of the Board should be to provide business policy guidance, not direct political direction from any level of government. This suggests:

- specific exclusion of elected officials, their staff or public servants
- identification of the minimum qualifications for Board participation in any enabling legislation or articles of incorporation
- nomination of certain Board members by community interests to provide the broadest possible representation.

A local airport authority must be responsive to the local community. Specific mechanisms include:

- community involvement in the master planning process (as Transport Canada currently does).
- A "sunshine" approach to authority board actions including public access to board meetings.
- active participation of the authority's managers in community economic development.

In Vancouver, the Authority will be subjected to conflicting pressures, such as the on-going debate over aircraft noise versus growth of service. Local authority operation will force the community to come to a consensus on issues such as these. Both the structure of the Authority and its mechanisms for community relationships will need to be developed with the knowledge that there will be conflicting interests which will need to be dealt with if the airport is to contribute to the economic health of British Columbia in a responsible way.

- There remains an operational question whether the airport Authority should operate only Vancouver International Airport, or whether is should operate VIA plus one or more of the local airports. This should be addressed in an operational study. Special consideration should be given to Boundary Bay, Pitt Meadows, Langley and Abbotsford. The acquisition of the downtown heliport should also be considered. The criteria for determining which of these airports, if any, should be included in the Authority's mandate include:

- current and forecast needs for general aviation reliever airports for VIA.
- the impact on overall financial viability of incorporating each of these relievers in the span of operation.
- current management structure at the reliever sites. For example Boundary Bay could be difficult to acquire even if it was a desirable objective.

. While the need for an inter-modal transportation capability is clear, the case for a single multi-purpose management structure is less obvious. A multi-purpose authority would be suitable for Vancouver if there is the potential to more fully develop the air-sea link concept than would otherwise be the case and the benefits of a multi-purpose authority exceed the incremental overhead costs.

. While the U.S. experience with airport capital project financing substantiates the viability of private financing for airport development, the financing structure in Canada will likely be somewhat different. A preliminary examination of VIA projections concludes that, given the correct balance of revenue generating capability, capital and expense budgeting and favorable market conditions, a local authority could successfully access the Canadian long term debt market.

. An appropriately structured and staffed authority will contribute to a cooperative, mutually beneficial relationship with air carriers, other aviation users, concessionaires, tenants, passengers and the community at large.

- Approximately 84% of Canada's airports are operated by parties other than Transport Canada. Policies and practices exist delineating the responsibilities of Transport Canada and of the airport operator. In addition to remaining the provider and operator of air traffic systems, Transport Canada would remain the regulator and inspector in airside safety and security.

Conclusions

1. While there are still issues to be resolved, a plan to create and operate an independent self-financing local authority at Vancouver International Airport is sound and feasible, according to research conducted for this study.

2. The policy of the local authority should be determined by a Board of Directors representing a broad range of community interests.

3. The local authority should be responsible for management of VIA and such other airports as a review of operational requirements suggests. The authority would work closely with west coast ports but not incorporate them within the same management system at this time.

4. Financing of the authority in private capital markets is possible, provided sound business practices are followed.

CHAPTER 7. FINANCIAL VIABILITY

- To assess the financial viability of VIA, financial projections over 19 years were developed, using the Transport Canada Financial Projection System. The figures were based on past performance, current information from Transport Canada and a series of assumptions selected on the basis of their significance to costs and revenues and their likelihood of occurrence. A list of financially sensitive factors was compiled.

- A preliminary financial viability study was undertaken by Price Waterhouse. The essential criterion of the Airport's "financial viability" is whether it can generate cash in the long term. (Cash generated means cash actually received from revenue sources and debt issues, less cash actually paid out for operating costs, the purchase of fixed assets and debt principal payments. Long term is the 19 years covered in the projections.) The analysis used four projections and came to the following conclusions.

    - Base Case I assumes that VIA is taken over from Transport Canada and no new initiatives are taken to increase revenues, reduce costs, or change the capital program.

      Results: Without changing the existing revenue and cost structure of the Airport, and with future capital expenditures averaging about $15 million per annum, this projection shows a positive income stream, slowly declining due to the gradual increase in servicing the debt issued for the capital program. Since the Airport generates and accumulates some $20 million in cash each year from current earnings, the strength of the financial viability is high.

    - Base Case II presents the financial results assuming that the capital expenditure forecast provided by Transport Canada is significantly understated. All the capital expenditures and necessary financings are doubled in every year.

Results: This projection shows strong but declining inability over about 20 years, then an viability to operate out of current earnings unless other variables are introduced, such as financial assistance in some form (grants, subsidized debt or certain capital expenditures paid for by government).

- Speculative Case I builds on Base Case I by introducing the factors that make the Local Authority concept attractive, namely, an increase in plane movements and passenger volumes, increased concession revenue, reduction in operating costs and an increase in fixed assets.

Results: This shows that relatively small increases in revenues and decreases in operating costs can contain the growth in debt servicing so annual cash flows rise slowly throughout the projection period.

- Speculative Case II further assumes that allowance is made for a third runway and major renovations to the existing terminal to improve space usage commencing 1997/98.

Results: A total of $125 million is provided for the runway and terminal renovations resulting in a distinct drop in annual cash flow for a short time, and subsequent recovery. Negative cash flows to do not occur in any year and these major expenditures could be funded, at least in part, out of the cash flows generated in previous years.

- The table immediately following presents graphically the level of cash flow generated in each of the four cases.

Conclusions

1. VIA is financially viable in the long term, that is, will generate a positive cash flow, as long as capital expenditures are contained, and naturally would become even more viable if measures are taken to increase operating profitability.

2. The key success factors to VIA's financial viability are:

   - reasonable acquisition costs;
   - a fair allocation of revenues, including taxes;
   - development of a business case for every major capital expenditure, demonstrating an acceptable rate of return on the investment;

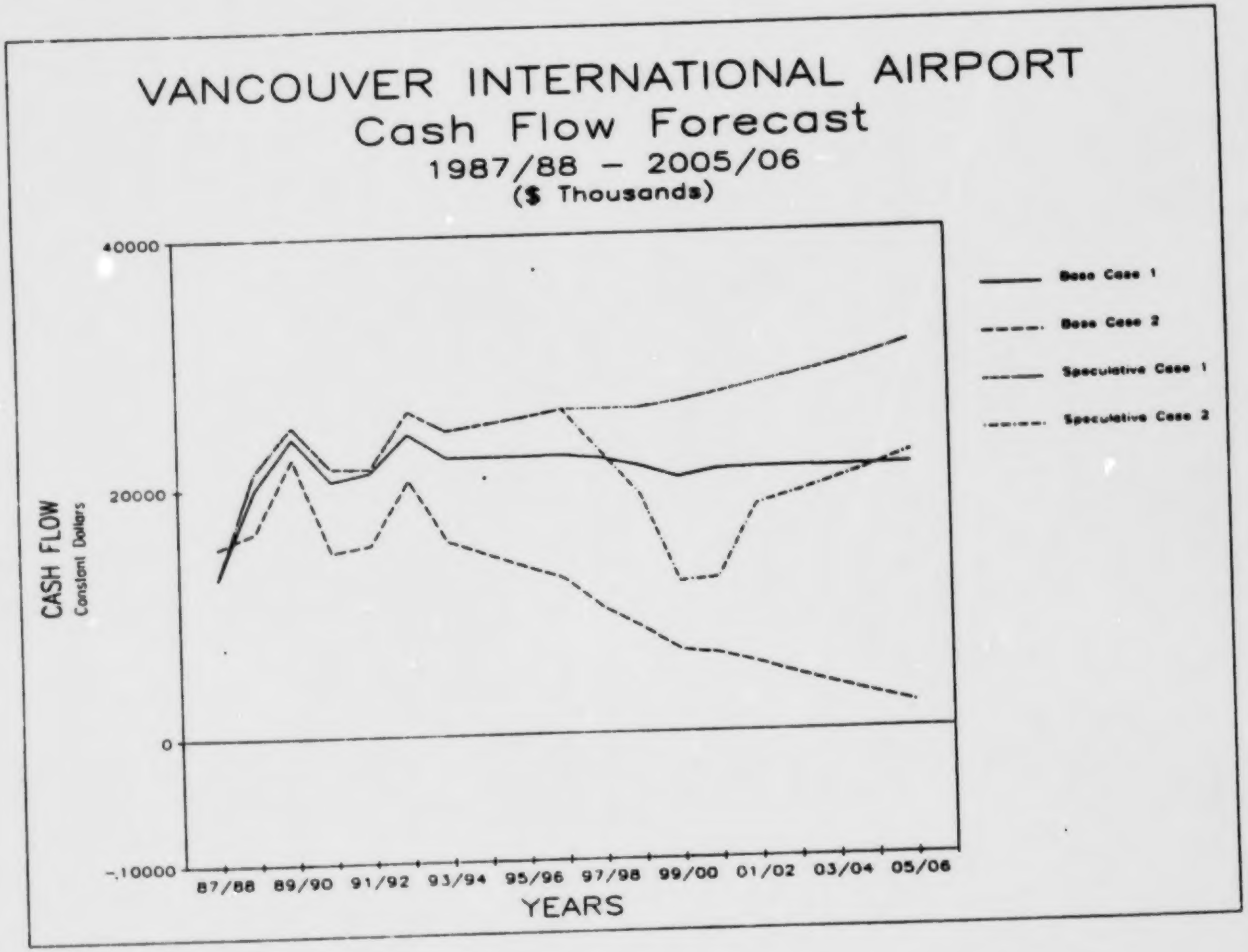
   - use of debt instruments that have the most favourable terms, and/or negotiate grants or special financing arrangements from the Federal Government

   - certain types of costs, such as those required for security and air traffic control which VIA may be required by federal regulation to install, funded, in whole or in part, by the Federal Government.

   - increases in revenues by various entrepreneurial measures; and

   - decreases in operating costs by introducing private sector standards of control.

3. The financial viability of VIA depends, ultimately, on the transfer arrangements concluded with the federal government.



VANCOUVER INTERNATIONAL AIRPORT
Cash Flow Forecast
1987/88 – 2005/06
($ Thousands)

CHAPTER 8. A PLAN OF ACTION

- There is a new, competitive air transport environment and VIA must respond to the challenge. A timid response which only tinkers with the system or a long delay in implementing fundamental change could have serious consequences. The status quo will result in a loss of market share that will be very difficult to retrieve. To grow with the new opportunities created by the fundamental shifts in the air transport industry demands that VIA adopt a more competitive, market- and customer-oriented strategy. The Pacific Rim freight and passenger air transportation markets are among the fastest growing in the world. The overriding objective must be to have the Vancouver International Airport recognized as a truly world class airport. To do so it must position itself, not only as Canada's gateway to the Pacific Rim, but as an important in-transit link between the Orient and Europe, South America and points in North America and as a desirable destination in itself. A local authority is the best management system to achieve these objectives.

- The basic goals of a local authority management system include:

  - Better community control and more responsiveness to local concerns. Marketing, in particular, could be more easily integrated into local programs.

  - More innovative management and flexibility: not being bound by national policies and the national bureaucracy.

. .

- Mandate of the airport could include broader economic development and community goals.

- Potentially improved access to capital for expansion since expansion can be based on economic concerns and financial performance, not political policies of restraint or redistribution.

- Development of more on-site commercial enterprises such as duty-free shop expansion and entertainment facilities and a general increase of non-aviation use of the airport land. Potential for the community to utilize the airport.

Recognizing its great impact on the provincial economy, VIA must be operated as a powerful tool for regional economic development. Specifically, VIA's new management structure must have the following characteristics:

- be able to identify and respond quickly to commercial as well as industrial development opportunities;

- be financially accountable with a fee structure which will help promote the growth of traffic beneficial not only to the airport but to the region as a whole;

- be able to improve and strengthen linkages with other B.C. industries like tourism and high technology manufacturing;

- allow VIA to capitalize on all opportunities which could benefit the region from an economic development standpoint, including Foreign Trade Zones.

- The critical steps in establishing a local authority include:

    - feasibility study including selection of sponsoring group (already completed);

    - definition of legal structure and preparation of enabling legislation;

    - selection of first Board of Directors and identification of principles representing a community position;

    - agreement on agenda, process and timetable for transition.

- The process must be characterized as a mutual desire to achieve a common objective, namely implementing the optimal management system, and not an adversarial negotiation.

Conclusion

The objective of this process is to create a management structure that can best make the decisions that will determine the future of VIA. The Airport Planning Group did not consider such questions as whether a further runway is required at VIA and, if so when. Nor did it inventory or evaluate the airport's assets or undertake an operational study to determine which regional airports, if any, should be included in the VIA management system. These important issues, and many others, are the responsibility of the airport Authority once it is created and can begin the very serious job of exploring the options and, based on its assessment, putting forward proposals. It was not the mandate of the Airport Planning Group to plan anything; rather to advise on the management system that can best plan the future of VIA. Whatever decisions follow, they will be based on sound planning principles and responsive to community interests. A locally based authority with a mandate to efficiently manage existing and future resources and obliged to serve the needs of the local community will, we hope, begin the process of consensus building needed to secure the airports future.

The need to take action is clear. The time to take action is now. All that remains is for people of vision to launch the process that will not only change the management system at the VIA, but expand the role the airport plays in our community and make it, truly, an international gateway and world class airport.

RECOMMENDATIONS

Recommendation Number 1.

A Vancouver International Airport Authority be created by enabling legislation.

Recommendation Number 2.

The VIA be a local public authority with powers to assume management and ownership of VIA. The authority would be:

- **a publicly owned corporation;**
- **locally based and controlled;**
- **able to collect revenues and make expenditures on its own authority;**
- **self-financing, with authority to access private capital markets;**

- representative of users as well as the local community and business interests;
- structured to be able to reach decisions efficiently;
- operated in a responsible and business-like manner, while recognizing the needs of the community as a whole.

Recommendation Number 3

The VIA Authority adopt a market- and customer-oriented approach and implement an effective marketing program. This means not only analyzing the opportunities created by the changing air transport environment and creating a distinctive market niche, but also responding creatively and quickly and implementing decisions without delay.

Recommendation Number 4

The legislated mandate of the VIA Authority be broad enough to include economic development as well as transportation related undertakings.

Recommendation Number 5

The Asia Pacific Initiative Advisory Committee work with the governments involved to establish the process and timetable for the transfer of management to a local authority.

THE ASIA PACIFIC INITIATIVE

On December 16, 1986, federal and provincial ministers signed a Memorandum of Understanding (M.O.U.) calling for the coordination of initiatives to enhance British Columbia and Vancouver as Canada's Pacific Centre for trade, commerce and travel. The M.O.U. was later designated as the Asia Pacific Initiative.

On June 2, 1987, the Asia Pacific Initiative Advisory Committee (APIAC) – drawn from the private sector – was established to advise federal and provincial ministers of initiatives that might be undertaken to achieve the objectives of the M.O.U. This advice is transmitted by the APIAC to the federal-provincial Pacific Council of Ministers through a Ministerial Executive Committee that meets regularly with the APIAC.

The APIAC has appointed task forces that are addressing opportunities and advising the Governments of Canada and British Columbia in the areas of international finance, trade, transportation, tourism, cultural and social impact and the export of professional services. More than 100 volunteers from the private sector are engaged in this work.

ASIA PACIFIC INITIATIVE

ASIA PACIFIC INITIATIVE

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VANCOUVER INTERNATIONAL AIRPORT
PLANNING GROUP

REPORT

NOVEMBER 1987

The Vancouver International Airport Planning Group
A Committee of the
ASIA PACIFIC INITIATIVE
Produced this Report on the
Goals, Ownership and Management Options
For the
Vancouver International Airport

EXECUTIVE SUMMARY

> **"The changing environment in air transport is not just a threat, but an opportunity. With the right attitude and management structure, Vancouver International Airport can exploit the competitive forces in world air transport to its advantage, resulting in a higher level of B.C. economic activity."**

- Airport Planning Group,
Transmittal letter, November, 1987

VANCOUVER INTERNATIONAL AIRPORT (VIA):
FROM BIPLANES TO BIG BUSINESS

Disdained by Charles Lindberg in 1928 because there was "no airport fit to land on", Vancouver scrambled to salve wounded pride by grooming a Lulu Island field and offering a welcome mat to the brave new world of aviation.

Curiosity gave way to commerce.

Business boomed.

Vancouver International Airport, now the second busiest in Canada, is a vital part of local, regional and national economies. More than eight million passengers and 100,000 tonnes of air freight a year translate into more than 12,000 direct jobs.

The airport is crucial to tourism, now B.C.' number two industry. Businesses require it.

In all, VIA represents an estimated 3.1 per cent of the entire provincial gross domestic product. In British Columbia's resource-based economy, the airport is bigger than fishing, metal or coal mining - and equal to agriculture.

However, for all its success and potential, it is perceived as an airport pretty much in a holding pattern.

Irresistible forces of change now are buffeting the way people move and transport their cargoes through the world's skies.

This presents both the challenge, and the opportunity.

THE WILDLY COMPETITIVE BLUE YONDER

Hard decisions must be taken now to chart Vancouver International Airport's future course, and to secure for it the world-class standing that is within its grasp.

The skies simply are not filled with aircraft idly looking for a picturesque place to land. The competition is fierce, and getting keener. A business-as-usual approach will only guarantee lost business for VIA in tomorrow's global marketplace.

For airports, the future means adapting to a new, competitive environment based on logistical systems of air transport. An airport, as part of a logistical system, facilitates the flow of goods and people into and out of a region; it also can be a transfer point between two distant regions.

In addition, deregulated airlines competing for passengers are routing through newly identified airport 'hubs'. Tourists wishing to see the mountains and shop in a city, might not care whether they pass through Seattle, Calgary or Vancouver.

Seattle, with very innovative, entrepreneurial management, has been successfully competing with Vancouver. Even Toronto, with new long-range aircraft that can now fly non-stop from Tokyo, is becoming a serious competitor for Asia-Pacific traffic that traditionally has been Vancouver's.

The revolution in the air transport industry is also being fuelled by:

- liberal bilateral treaties which grant landing rights in more cities to more international airlines;
- airline mergers and privatization of state-owned carriers;
- free trade, which could see a realignment of east-west routes and increased north-south traffic for some Canadian airports;
- intermodal (port, airport, railway and highway) links; and
- larger, longer-range aircraft and a new generation of high-speed, quieter, fuel-efficient turboprop aircraft;

The competition are already making their moves. But Vancouver has not kept pace with rival airports in winning new international passenger traffic. Seattle, San Francisco and Los Angeles have recorded growth three times greater than Vancouver.

OPPORTUNITIES & PROMISE

The right attitude sees revolution as an opportunity; change as a challenge with far-reaching rewards.

The Airport Planning Group believes that Vancouver International Airport, given the right tools, can build and secure even greater economic growth and prosperity for the entire region. It means operating and using VIA to help attract new industries and services to regional sites far beyond the airport fence.

A 1986 study concluded that an ambitious planning strategy for VIA could, by 1995:

- create more than 400 new jobs;
- add $37 million in cargo traffic; and
- boost annual revenues by $92 million.

Other opportunities include:

- Development of a duty-free Foreign Trade Zone or special enterprise zone using tax incentives, on airport lands. Such zones, which encourage the production of goods that would otherwise be made offshore, can be a major impetus for economic growth, attracting manufacturers and creating jobs.

- Development of new routing systems, such as establishing VIA as the gateway for traffic between Pacific Rim nations and South America or Europe.

- Marketing VIA throughout the world as part of an overall logistical package, possibly taking advantage, for example, of the international demand for B.C. seafood.

- Establishing VIA as an international cargo centre, handling Pacific Rim cargoes destined for North America, South America and Europe.

- Viewing shops at the airport as an important customer service which help to make it attractive to travellers, meaning higher airport earnings and cash retained in the community. Case studies noted that Amsterdam's Schipol airport woos duty-free shoppers from around the world with money-back guarantees if lower prices are found anywhere else.

A LOCAL AUTHORITY: IN CHARGE, IN TOUCH

Achieving the maximum potential economic benefits for the whole region requires a new management structure for Vancouver International Airport. The Minister of Transport, in April, 1987, invited proposals for the ownership and/or operation of federal airports ". . . to provide for increased responsiveness to local commercial and economic initiatives". Transport Canada will remain responsible for safety and security, including air traffic control.

This study examined seven possible management options for VIA, ranging form private sector to federal government operation. The analysis confirmed the findings of previous studies: a Local Authority is the most effective airport management system.

A Local Authority would have its own board of directors, which will set policy and make all final decisions. The Authority would be publicly owned but would not depend on government funding. It's financial viability would depend on the terms of the transfer of airport assets concluded with the federal government.

A Local Authority for VIA would be:

- capable of fast, creative responses to market changes and opportunities;

- accountable to, and controlled by, the region it serves;

- entrepreneurial, market-driven, committed to serving customers;

- able to use the airport to promote broader economic development and regional and community goals;

- free to pursue policies which clearly benefit VIA but cannot be justified as national policy.

- empowered to retain earned surpluses in the region, so they may be used for expansion and to lower user costs, boosting traffic and strengthening the regional economy.

GETTING THERE: THE NEXT STEPS

Making the transition to Local Authority control of the Vancouver International Airport requires the cooperation and goodwill of all those concerned with the development of VIA.

This study outlines the benefits such a change would help to bring about for the entire region.

The Asia Pacific Initiative Advisory Committee is ready to work with the governments involved to establish a process and a timetable for the transfer of management to a Local Authority.

The overriding objective must be to have VIA recognized as a truly world-class airport.

RECOMMENDATIONS

Recommendation Number 1.

A Vancouver International Airport Authority be created by enabling legislation.

Recommendation Number 2.

The VIA be a local public authority with powers to assume management and ownership of VIA. The authority would be:

- a publicly owned corporation;
- locally based and controlled;

- able to collect revenues and make expenditures on its own authority;
- self-financing, with authority to access private capital markets;
- representative of users as well as the local community and business interests;
- structured to be able to reach decisions efficiently;
- operated in a responsible and business-like manner, while recognizing the needs of the community as a whole.

Recommendation Number 3

The VIA Authority adopt a market- and customer-oriented approach and implement an effective marketing program. This means not only analyzing the opportunities created by the changing air transport environment and creating a distinctive market niche, but also responding creatively and quickly and implementing decisions without delay.

Recommendation Number 4

The legislated mandate of the VIA Authority be broad enough to include economic development as well as transportation related undertakings.

Recommendation Number 5

The Asia Pacific Initiative Advisory Committee work with the governments involved to establish the process and timetable for the transfer of management to a local authority.

Asia Pacific Initiative
770 Pacific Blvd. South
Vancouver, British Columbia

Attention:
Mr. E. Nesmith
Chairman

A recent documentary on the Pacific Rim revealed this startling fact: "In 1984, three out of every five jumbo jets in the air were flying the Atlantic. Today, three out of every five are crossing the Pacific." Many of those jets are either flying over or alongside British Columbia. This shift in the pattern of air transportation reflects not only the strong growth of the Pacific Rim economies, but also a more fundamental change in the logistics of air transportation. Both of these have important implications for Vancouver International Airport (VIA).

While the Pacific Rim freight and passenger air transportation markets are among the fastest growing in the world, VIA is faced with the real possibility of losing its stature as an air transport gateway to the Pacific Rim. With the implementation of North American deregulation and an increasingly open skies policy across the oceans, carriers are channeling their growth to other Pacific Coast centres, such as Seattle. For example, from 1982-85, total international traffic growth (including transborder) was 21% at Seattle, 25% at San Francisco, 26% at Los Angeles and 8% at Vancouver. This traffic is especially important to Vancouver, as it relies more heavily on international traffic than do the U.S. Pacific gateways. International traffic comprises between 8%

and 16% of total traffic at Seattle, San Francisco and Los Angeles, versus over 30% at Vancouver.

The threat to VIA is not just to the south. Although Vancouver is at present the only Canadian gateway to the Orient, foreign carriers have made clear their preference to serve Toronto and new airplane technology makes overflying Vancouver to serve Eastern Canada and the U.S.A. possible.

The implications are obvious. To maintain its existing market share, much less to grow with the new opportunities, VIA must adopt a more aggressive strategy. As is happening throughout the world in response to the new competitive air transport environment, VIA must focus its attention on marketing and working with its customers (and potential customers) to serve their needs. This is crucial if the airport is to prevent a fall in traffic and grow to become a truly world class airport. To implement this new orientation, a fundamental review of mandate and management systems is required.

The changes ahead for VIA affect not just the immediate airport users, but the community as a whole. The airport accounts for nearly 13,000 direct jobs, and an additional 17,000 indirect and induced jobs in B.C. This amounts to 3.1% of total provincial gross domestic product, a share greater than fishing, metal or coal mining and equal to agriculture. The demise of our airport would be felt through the B.C. economy. On the other hand, the airport can be viewed as a powerful engine of economic growth. A 1986 study concluded an enhanced planning strategy could, by 1995, increase passengers by 185,000, add $37 million in cargo and $92 million in annual revenue and create over 400 new jobs. The changing environment in air transport is not just a threat, but an opportunity. With the right attitude and management structure, VIA can exploit the competitive forces in world air transport to its advantage, resulting in a higher level of B.C. economic activity.

The Air Transport Revolution

Air Transportation is in the throes of a major upheaval. This upheaval began roughly ten years ago with U.S. airline deregulation and the negotiation of several "liberal" bilateral treaties. It will continue for several more years as the industry continues to adjust to the new freedoms and competitive forces and as potential new developments, such as free trade in North America, make themselves felt. These changes are occurring on a global scale, and are dramatically altering the routing patterns of air carriers. As routes shift, airports and the communities they serve rise and fall in their fortunes. Vancouver International Airport will be greatly affected by these forces. Exciting and important challenges lie ahead.

As air transportation makes the transition from regulation to the open skies of competition, two distinct paths to the future can be pursued. One path will see the new environment as a great commercial and social opportunity. This path will take the challenge of the new regime and use it to develop the airport, thereby acting as a vital tool for fostering general economic development in the Greater Vancouver region. This path is active and involves controlling one's destiny.

The alternative path is passive. This "business-as-usual" approach would witness a loss of traffic and an erosion of some of Vancouver's current economic base as other (active) airports effect strategic shifts in traffic flows and capture the economic activity tied to that traffic. This is not a criticism of the airport managers, but a recognition that the current mandate and administrative structure is seriously deficient. Just tinkering with current airport policy will necessarily result in pursuing this passive path. Other airports have already chosen the active path and are well underway with their plans -- plans that necessarily will be to Vancouver's detriment.

Responding to the Challenge

The Governments of Canada and British Columbia have responded to the challenge. This report is a preliminary step in a process to identify strategies that Vancouver International Airport can pursue to exploit these new opportunities. It examines the history of the airport and the genesis of the Airport Planning Group, explores the changes occurring in air transport markets and the implications of these changes for the airport and identifies economic development opportunities. The report then examines management options, evaluating their ability to take advantage of the opportunities created, makes a series of recommendations and, finally, sets out a course of future action.

The Report of the Vancouver International Airport Planning Group is submitted in three parts: a Summary Report, the Report and Appendices.

The Airport Planning Group would like to take this opportunity to thank and acknowledge the contribution of the many individuals and organizations that assisted it in its work, particularly Transport Canada and the B.C. Ministry of Economic Development. Special appreciation is extended to those involved in preparation of the report, including Project Manager Russell Anthony; Researcher David Dale; Dr. Michael Tretheway (Chapter 3); Tony Seguss, Sylvie Lefebvre and Dugal Smith of Price Waterhouse (Chapter 4,5 and 7); Gordon Hamilton of Sypher:Meuller International (Chapter 6) and Lorraine Vinish and Kim Sheridan who produced the final copy.

The conclusions and recommendations are those of the Airport Planning Group and we commend them for your consideration.

Respectfully submitted,

VANCOUVER INTERNATIONAL AIRPORT
PLANNING GROUP

Graham Clarke, Chairman

Jim Cosh

Stuart Hodgson

Rhys Eyton

REPORT

# of the

AIRPORT PLANNING GROUP

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Chapter 1: An Introduction

Memorandum of Understanding between Government of Canada and Government of British Columbia

On December 16, 1986 in Vancouver, B.C., the Honourable Grace McCarthy, Minister of Economic Development for British Columbia, and the Honourable Pat Carney, Minister of International Trade for Canada, signed an agreement promoting the development of British Columbia as Canada's Pacific centre for trade, commerce and travel.

The agreement is structured on coordinating initiatives that will enhance British Columbia's future economic development:

- coordinating transportation improvement and stimulating new economic activities related to transportation;
- encouraging the growth of international banking and other financial services in Vancouver;
- enhancing the scope and extending the range of trade related services provided by public and private sector institutions;
- enhancing trade opportunities with respect to a number of professional and technical services in which a significant expertise has evolved in British Columbia; and
- improving the coordination of public and private sector marketing and promotion of tourist destinations and conference facilities.

A full text of the Memorandum of Understanding is found as Appendix 1-1.

Asia Pacific Initiative

To pursue the objectives of the Memorandum of Understanding a private sector Advisory Committee (currently 13 members) was established June 2, 1987. The Advisory Council meets monthly, usually with the Hon. Pat Carney and the Hon. Grace McCarthy in attendance, and reports to the Federal/Provincial Council of Ministers. The Advisory Committee is chaired by Mr. Eugene Nesmith, Vice-Chairman of the Hong Kong Bank of Canada. A list of current members of the Advisory Council is found as Appendix 1-2.

The Chairman has established seven task forces, including the Airport Planning Group Task Force. The Task Forces are:

> Financial and Legal Services, under the chairmanship of Arthur Hara, Chairman and C.E.O. of Mitsubishi Canada Limited, whose objective is to enhance the development of the international finance and legal sectors, particularly as they relate to the Asia Pacific Region.
>
> Transportation, under the chairmanship of Kirk Foley, President of CTM Management Services (formerly President of U.T.D.C.). This task force is investigating ways in which transportation systems may be improved to foster economic development. There is close communication and cooperation between the Transportation Task Force and the Airport Planning Group Task Force.
>
> Institutions to Facilitate Trade, under the chairmanship of Dr. Peter Lusztig, Dean, Faculty of Commerce and Business Administration, U.B.C. This group is examining a wide variety of issues related to institutions that facilitate Asia Pacific trade including trading houses, trade fairs and government organizations, both domestic and foreign.

Tourism, under the chairmanship of Nancy Greene Raine. It reviews Asia Pacific markets and identifies opportunities for increasing packaged tours, conventions, incentive travel and vacations in British Columbia.

Export of Services, chaired by Wendy McDonald, President of B.C. Bearing Engineers Limited, assisted by Sid Fancy of the City of Vancouver's Economic Development Office. This group is investigating how B.C. can stimulate the export of its expertise in services such as engineering, education, medicine and health, architecture and design, city planning, environment protection, industrial services and film production.

Cultural and Social Impact Working Group, under the chairmanship of Mr. David Lam, C.E.O. of Canadian International Properties Ltd. This task force is working to ensure the cultural and social impacts of any proposed initiatives are taken fully into account and, secondly, to identify and recommend initiatives of a cultural and social nature which would facilitate the achievement of the objectives of the Asia Pacific Initiative.

Airport Planning Group, under the chairmanship of Graham Clarke, President and C.E.O. of the Clarke Group of Companies and immediate past Chairman of the Vancouver Board of Trade. This task force was mandated to identify the operational and planning goals for the Vancouver International Airport and make recommendations designed to realize the airport's potential as an international gateway to the Pacific Rim and a world class facility. The membership of the Airport Planning Group in addition to Mr. Clarke is Mr. Rhys Eyton, Chairman and C.E.O. of Canadian Airlines International; Mr. Stuart Hodgson, Chairman of B.C. Transit; and Mr. James Cosh, Partner in the accounting firm of Thorne, Ernst and Whinney.

The recommendations of the Airport Planning Group took on added significance with the policy statement of the Minister of Transport that he is prepared to receive proposals for the transfer of Canadian Airport operations.

The Airport Planning Group and Transport Canada Policy

On April 8, 1987 the Federal Minister of Transport announced a new policy concerning the future management framework for airports in Canada. In essence, the Minister advised that he is prepared to receive proposals for the transfer of airport ownership and/or operation. A full text of the Minister's April 8 statement is found as Appendix 1-3.

In response to the Minister of Transport's statement, the Asia Pacific Advisory Committee mandated the Airport Planning Group to undertake a study to serve the following objectives:

a) Identify operational and planning goals for Vancouver International Airport consistent with its position as a gateway between North America and the Asia Pacific region and as a vital component of the British Columbia economy.

b) Identify the benefits and costs of pursuing these goals by instituting a new management structure at Vancouver International Airport involving provincial, regional, or local authorities.

c) Recommend ownership and management structure options appropriate for realizing the potential of Vancouver International Airport.

d) Outline the future actions required to implement the ownership and management structure options identified for the Vancouver International Airport.

In fulfilling its objectives, the Planning Group was directed to identify economic development opportunities and undertake studies of financial, legal, and organizational issues related to management of Vancouver International Airport and to review the objectives of the airport, the financial feasibility of options, ownership and management structures and comment on the legal and regulatory implications of any change in airport operations. A complete text of the Airport Planning Group's terms of reference are found as Appendix 1-4.

To assist it in carrying out its mandate, the Airport Planning Group retained a Project Manager, researcher and various consultants with the technical expertise required to gather the necessary data, conduct interviews, analyze the research and assist in preparation of the Planning Group's report. Attached as Appendix 1-5 is a list of staff and consultants and a brief description of their terms of reference. Through extensive use of computer modelling, interviews, research, communication with other airports and independent investigation, the information for this report was compiled and analyzed so the Planning Group could discharge its mandate.

Chapter 2: The Vancouver International Airport (VIA)

The History of Vancouver International Airport

In 1928, Charles Lindberg refused to visit Vancouver on his famous world tour as there was "no airport there fit to land on." Thus prompted by pride and a growing interest in aviation, the City of Vancouver established its first airport on a field near Lansdowne Park on Lulu Island that same year. This was to serve as a temporary facility until a permanent site was chosen. On July 22, 1931, 475 acres of land located on Sea Island, near Richmond, was purchased for $300,000 and the Vancouver Municipal Airport was formally opened.

At its inception, the airport was composed of a single 2,400 by 100 foot runway, an administration building, and two hangars. Management and ownership lay entirely in the hands of the City of Vancouver.

Passenger, mail, and cargo services began in 1934 between Vancouver and Seattle. The first scheduled passenger and mail service at Vancouver Municipal Airport began on September 1, 1937 and was provided by Trans-Canada Air Lines (later to be known as Air Canada). Service between Vancouver and Winnipeg and between Vancouver and Montreal was established in 1938.

On March 9, 1935, the City of Vancouver passed a resolution recommending the airport be taken over by the Department of National Defense. However, federal transportation policy at that time held that municipalities should provide and maintain their own facilities; the federal role was only to provide those facilities and services necessary for safe air navigation. The Department of Transport did however, contribute one-third of the cost of developing the airport, while the other two-thirds were provided by the city.

During the Second World War, Vancouver Airport was used as a base for the Elementary Flying Training School under the British Commonwealth Air Training Plan, which brought thousands of pilots to Vancouver for training. In August of 1940, the airport was taken over by the Department of National Defence for the duration of the war. Under this new administration, extensive improvements were carried out by the federal government including lengthening and strengthening existing runways and the construction of hangars and other buildings. On October 31, 1947, the airport was returned to the control of the City of Vancouver and an operating subsidy was granted by the Department of Transport. In 1948 the airport was renamed, Vancouver International Airport (VIA).

As traffic at VIA continued to increase in the 1950's, it became apparent that a major new terminal development would be required to handle the projected traffic growth. After prolonged negotiations, it was finally agreed that the federal government would purchase the lands, building and equipment for $2.5 million and on July 1, 1962 the Department of Transport assumed full responsibility for the operation and development of VIA.

VIA is now served by 21 airlines including Air Canada, Canadian Airlines International, United Airlines, Japan Airlines, Qantas Airlines, Western Airlines, Frontier Airlines, British Airways, and Wardair, together providing service to most parts of the world. In 1985, VIA reported 235,506 itinerant aircraft movements, making it the second busiest airport in Canada.

A Description of the Airport

Vancouver International Airport presently consists of:

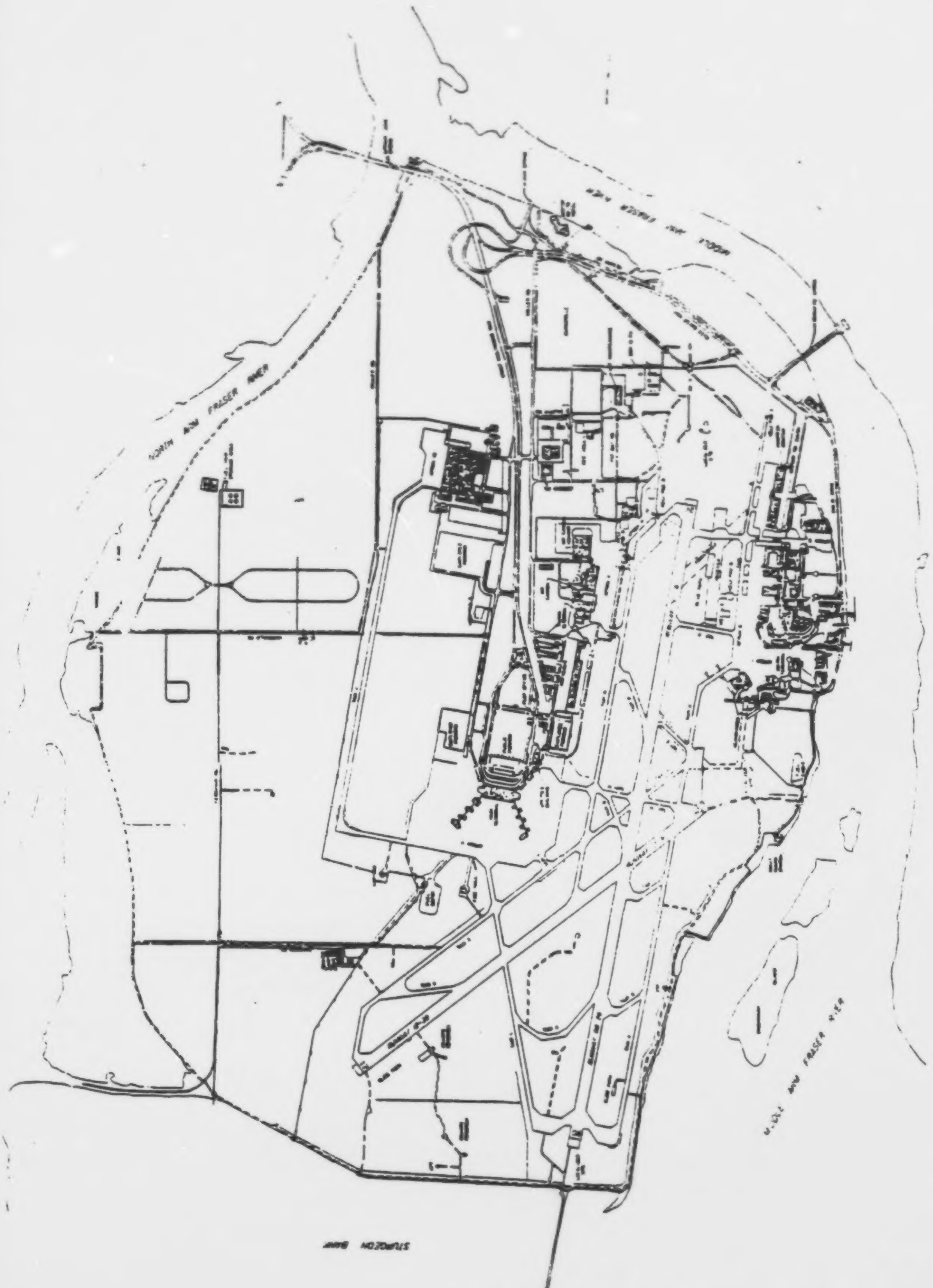
- 1480 hectares (with a total of 371 hectares vacant);

- two terminal buildings (the Main Terminal and the new South Terminal);
- 23 aircraft gates;
- two runways, a main runway and a shorter crosswind runway;
- a seaplane harbour on the south side of the airport; and
- various hangar facilities.

It is directly connected to Richmond by the Dinsmore Channel Bridge and the Moray Channel Bridge and to Vancouver by the Arthur Laing Bridge. A detailed map showing the airport and its main features follows.

Sea Island, on which VIA is located, is about 3.4 miles long and 2.5 miles wide and contains some 3,800 acres. It is of a uniformly flat, level surface, dyked about its perimeter and drained by a network of ditches, equipped with flood gates or pumps at their outlets. A causeway across MacDonald Slough joins Sea Island to Iona Island, a long, narrow piece of land of some 300 acres. Channel and floodplain deposits of the Fraser River still contribute to the sea-ward development of the delta at the rate of about 28 feet per year.

The main air terminal building was completed in 1968 and has undergone major expansion to increase its floor space to 67,765 square metres. It houses restaurants, bookstores, banks and currency exchange, car rental, duty free shops, flower shops, chocolate shops, cocktail bars, newsstands, hotel reservation telephones, post office, flight insurance, a barbershop, and a seafood specialty shop.


NORTH ARM FRASER RIVER
MIDDLE ARM FRASER RIVER
MIDDLE ARM FRASER RIVER
STURGEON BANK

There are four levels to the main terminal and all are accessible by disabled travellers through a combination of elevators, exterior ramps or escalators. In addition to the main passenger and cargo facilities, Level One houses Canadian Services areas for Canada Customs, Immigration, Agriculure Canada, and Health and Welfare Canada, Level Two contains space for US Customs and Immigration and Level Four contains Transport Canada Administration, Distinguished Visitors Lounge, airline administrative offices, Air Canada and Japan Airline first class passenger lounges. A schematic of the main terminal building showing the various uses is found as Appendix 2-1, a Transport Canada commercial lease inventory showing the leased area, use permitted and expiry date is Appendix 2-2, the amount of space separated by use is Appendix 2-3 and the commercial revenues generated are Appendix 2-4.

South Terminal Building was constructed in 1950 and was the focus of all airport activity until the completion of the present Air Terminal Building in 1968. It is now the terminus for the small commuter airlines and general aviation, operating primarily under Visual Flight Rules.

The building itself is a two-storey rectangular structure with a total floorspace of 2,991 square meters. The building is divided into three bays: the north bay holds the passenger waiting area, ticketing and baggage handling areas, concessions and office space on two levels and the south bay houses airline offices and couriers. The middle bay is currently unused.

One charter and six scheduled airlines occupy counter space within the South Terminal Building. Together they accounted for an estimated 213,000 emplaned and deplaned passengers in 1986. Transport Canada's South Terminal rental revenues for 1985 were $94,580.

Air Cargo estimated at 1.4 million pounds in 1987 is moved by several carriers through the South Terminal. The majority of South Terminal cargo involves the transportation of perishable goods such as fresh fish and other seafood. Modifications are currently planned which will improve the general look and operation of the facility over the next ten years.

While this general review of the airport is sufficient for the purposes of this Report, it is recognized that a detailed review of the airport, its land, assets, leases, contractual obligations and other encumbrances would have to be undertaken before a true "inventory" of the airport could be prepared.

Future Plans

Vancouver International Airport's approved Master Plan(1980) encompassed a comprehensive Land Use Plan which was updated by a Land Use Plan Update in 1986. The three major areas: North, Centre, and South were allocated specific land use functions.

Airport North:

The 1980 Land Use Plan reserved a large tract of land in Airport North for the future construction of an additional runway, and designated the area north of the runway reserve for long-term airport-related commercial development. The plan provides for a future access route to Iona Island and a linear park/trail along the north perimeter of the Island's dyke system.

The 1980 Plan still remains as the long term plan for this area. The 1986 Update proposes enhanced revenue generating land uses for this area until such time as the land is required for aviation purposes. The interim land uses are a mix of agricultural, commercial and recreational uses including enhanced agricultural usage throughout the runway reserve area (ten year horizon), a golf course/recreational centre for development in the northeast section (fifty year horizon), plant nurseries/greenhouses in the northwest section (twenty year horizon) and a fuel tank farm and sand storage area to be retained (indefinite horizon).

Airport Centre:

The 1980 Land Use Plan for Airport Centre, the airport's commercial core, was virtually unchanged in the the 1986 Update, ie. the same amount of land was retained for the Air Terminal Building and ground transportation expansion. As well, the Update identified available land for airport support services and commercial development. One exception to the 1980 Plan recommended the transfer of the 'recreational' designations to accommodate the airport's air cargo business and provide for additional commercial development sites.

Proposed Airport Centre development included expansion of Air Canada's and International Airfreight Terminals cargo facilities with land available for an 'all cargo' complex, hotel development adjacent to the Air Terminal Building, a multi-level parking structure directly east of the hotel, expansion of car rental and airline flight kitchen facilities along Miller Road, and development of light industrial/ commercial facilities (possibly Free Trade Zone) in the Jericho Road area.

Airport South

The 1980 Land Use Plan for Airport South profiled four basic land uses: passenger terminal, airport operation, general aviation and air carrier maintenance bases. The 1986 Update recommended that since the PWA Hangar had been sold to BCIT for educational purposes, the air carrier maintenance base designation in that area be changed to general aviation and the area west of the Coast Guard complex be changed from airport operations to long term commercial development. The 1986 Update was designed to guide the continuing development of the airport's general aviation, helicopter, and seaplane industries by providing airside and groundside infrastructure improvements.

Development projects for Airport South which have a significant impact on land use are the South Terminal Apron 1 expansion to provide increased aircraft operating/parking space, a new taxiway access south of Taxiway 'K' to provide airside access for commercial developement lots off Airport Road, and reconfiguration of the Bill Inglis/Russ Baker Way intersection to provide better access to Airport South.

Constraints

While more detailed analysis is handled elsewhere in this report, it is useful to recognize at the outset some of the operational constraints, be they financial or operationally based, affecting the current administration of the airport.

It is essential in any organization that capital investment decisions be carefully reviewed and strict tests applied. However, Transport Canada's present system may be deemed to be counter-productive to airport growth. Capital investment decisions are predicated on the laudable principle of cost recovery. However, with existing carriers having a quasi-veto over capital expansions (at the very least an ability to delay them), opportunities to make capital additions and refinements to attract other carriers not presently serving the airport are reduced and new carriers frequently lost. The Transport Canada policy on capital investment decisions is set out in Appendix 2-5.

McKinsey and Company commented in a study for the Task Force on the Future of Airport Management in Canada that "Asset

Management - the facility for making decisions among types of capital investments, based on trade-offs between service and potential returns; ie, the willingness and ability to 'starve' low return demands in favour of 'feeding' high return projects - was a skill central to the effectivness of the foreign airports we studied". McKinsey felt this skill was lacking in the existing or modified Transport Canada structure and was skeptical of how effective a modified Transport Canada would be in this area as well.

The other side of the question is the efficiency of capital use and allocation. Wood Gundy in consultation with McKinsey and Company, stated in a report to the Task Force on the Future of Airport Management in Canada that implementing straight forward management improvements could result in a $30-$50 million saving in the annual capital spending requirement of the Canadian Airport System. They went on to state that, "virtually the entire burden of capital funding could be moved directly to the private sector by developing a market financing mechanism in order to raise funds for future airport capital investments. This mechanism would be subject to the discipline of the private capital markets encouraging more efficient use of capital."

Wood Gundy and Morgan Stanley, in reports to the Future of Airport Management, stated that capital funding can be converted to a market financing mechanism that will use capital more efficiently, therefore decreasing capital expenditures and also helping fund worthwhile investment programs to attract new carriers and facilitate growth.

In addition to these financial constraints there are a number of development constraints (such as the need for pre-loading construction sites) and operational constraints, both environmental and facility based. Transport Canada's identification of development constraints are set out in Appendix 2-6 and operational contraints in Appendix 2-7.

These constraints are compounded by a structured, hierarchical approval system for all major management decisions. For a brief discussion of the federal controls on management decision-making see Appendix 2-8.

The Airport Planning Group commissioned a series of interviews with affected interests to determine the users perceptions of these contraints and their effect on attitudes towards the VIA. A brief review of these comments is found in Appendix 2-9.

It is recognized that while some of the constraints on the airport are institutional and can be changed, others are inherent in operating the airport site and will affect any management authority. A detailed analysis of the restraints would be useful.

Local Airports

Abbotsford Airport is located in the District of Matsqui in the Central Fraser Valley approximately 38 miles (61km) southeast of Vancouver, comprising an area of 538 hectares. The area served by the Airport for general aviation, ranges from Mission City in the north to Sumas in the south and from Yarrow in the east to Aldergrove in the west. It is minutes from the Trans Canada Highway.

Abbotsford Airport serves as the designated alternate when Vancouver international Airport is closed. The low density of Instrument Flight Rules traffic and its proximity to Vancouver make it convenient for air carrier flight crew training as well as general aviation instrument flight training. The Abbotsford Airport ranks 12th in Canada for aircraft movements, and is an all weather airport with a full category 1 Instrument Landing System. With its electronics, runways, taxiways, aprons and other facilities, the Abbotsford Airport can accommodate any private, commercial or military aircraft type in existence today. It has two runways and is complete with control tower, passenger terminal, 24 hour flight service station, firefighting, airfield maintenance and custom services.

Over 45 hectares of land are presently dedicated and available to serve the development of business on the airport. It is owned by Transport Canada and is home to the world acclaimed annual Abbotsford International Air Show each August.

Financial information for Abbotsford Airport is found in Appendix 2-10.

Boundary Bay Airport is located 13 nautical miles southeast of Vancouver International Airport, a 45 minute drive from downtown Vancouver. The airport is bounded by Boundary Bay to the south and the rail line to Roberts Bank on the north and west. Land use in the vicinity of the airport is predominantly agricultural with some industrial and urban land use to the west. The airport is owned by Transport Canada and operated by Aztec Aviation Group Ltd. under the terms of a long term lease. The site consists of 520 hectares and two runways constructed of concrete overlain with asphalt. An air traffic control tower and two large hangars are situated on the north side of the field. Customs and fuel services are available.

Transport Canada classifies Boundary Bay Airport as a regional, Sub-Class V airport that supports commercial air services with light weight aircraft. The airport is a designated reliever airport for VIA and also serves other commercial and private general aviation operations (business and recreational flying) to the extent that the airport systems capacities, such as runway and taxiway pavement load ratings, are not exceeded.

Changes in the role of Boundary Bay Airport are not anticipated by Transport Canada. For planning purposes, and in recognition of the restrictions imposed under the Environmental Assessment and Review Process. the critical aircraft will be limited to those having a gross weight of 12,500 lbs or less, and capable of operating from a 2500 ft. runway.

Financial information for Boundary Bay Airport is found in Appendix 2-10.

Chilliwack Airport is located 60 nautical miles east of Vancouver International Airport, 90 minutes drive from downtown Vancouver. The airport lies south of Chilliwack City and north of the Trans Canada Highway. Surrounding land use to the north-northeast is residential, light industrial to the west with the remainder of the area being agricultural.

The airport is owned and operated by the District of Chilliwack as a public licensed day/night Visual Flight Rules general aviation airport. Day to day management of the airport is handled by an experienced local aviator under contractual agreement with the District. Services available at the airport include fuel sales, aircraft sales, aircraft rentals and repairs, pilot training, a restaurant, hangar, space and customs. The airport's role is a general aviation facility serving the Lower Mainland. Seventy percent of the traffic is accounted for by local commercial air service, mainly for logging and mining industries and the flying club.

The airport occupies 55.8 hectares of municipally-owned property. It consists of a lit runway fed by a hard surfaced taxiway and apron. Support services and hangars are located on the north side of the field. There is no control tower.

Delta Air Park is sited on the shore of Boundary Bay approximately 15 nautical miles southeast of Vancouver International Airport, on the eastern edge of the Boundary Bay Airport control zone. Surrounding land use is primarily agricultural with some non-aviation commercial operations bordering the air park.

Delta Air Park is an unlicensed aerodrome catering mainly to privately-owned and home built-aircraft. Services provided at the aerodrome include fuel, oil, tiedown, aircraft servicing, overhauls and a coffee shop. It is a base for a number of commercial helicopter operations and the local chapter of the Experimental Aircraft Association. The air park consists of approximately 32 hectares and is privately owned and operated. There are two turf runways forming a 'V' and two heliports licensed for private use under day/VFR conditions. Hangar facilities and tiedown areas are located in the centre of the 'V'. The field is occasionally closed in winter as runways become soft during extended periods of rain.

Fort Langley Airport is located on the south side of the Fraser River, east of Fort Langley and southeast of McMillan Island. Land use surrounding the aerodrome is primarily agricultural. The airport is privately licensed and offers fuel, maintenance facilities, hangar space and tiedowns. Some seaplane pilot training is conducted. In addition to the water landing area, a small turf runway allows aircraft to be fitted with floats or vice versa. The airport is owned and operated by Fort Langley Recreations as a privately licensed day/VFR water facility. The adjacent 2000 foot turf land strip is unlicensed. Upgraded seaplane floats are capable of accommodating approximately 15 aircraft. An asphalt ramp west of the floats is used for launching and retrieval of seaplanes.

Hyack Air Water Airport is located on the north shore of the Fraser River immediately east of the Patullo Bridge, 12 nautical miles upstream from Vancouver International Airport. Land use surrounding the airport is mixed commercial and industrial. The privately licensed facility is owned and operated by Hyack Air as a base for their air services. Limited fuel and oil are available to itinerant aircraft. The facility consists of 150 feet of wooden floats accessed by a gangway. A large trailer houses company offices and passenger facilities. The take-off/landing area occasionally freezes in winter, and is subject to strong currents and debris accumulations.

Langley Airport is located approximately 25 nautical miles southeast of Vancouver International Airport, it is about 40 minutes drive from downtown Vancouver. The airport is just east of the city of Langley with the Fraser Highway bordering its southern edge. Surrounding land use consist of residential/commercial property to the west and south, with agricultural land to the east and north.

Langley Airport is classified as a local commercial, airport that supports commercial air services operating with light weight aircraft. The airport is a reliever airport for Vancouver International and serves other commercial and private general aviation operations to the extent that airport systems capacities, such as runway and taxiway pavement load ratings, are not exceeded. The critical aircraft for planning purposes is the DHC-6, Twin Otter.

Langley Airport is a publicly licensed day/VFR general aviation airport. It is primarily a base for pilot training. Aircraft charter, rental, maintenance, engine overhaul, fuel service and aircraft storage are available. No changes in its role are anticipated.

The airport is owned and operated by the Corporation of the Township of Langley and is built on 50 hectares of land. The runways are configured in an open 'V' with one runway being turf and the other asphalt. Use of the turf runway is limited, particularly in winter, when it can become soft due to rainfall. In 1971 Transport Canada installed a control tower. There are a number of small buildings and hangars located in the open area of the 'V' and on the east side of the airport.

Financial information for the Langely Airport is found in Appendix 2-10.

Pitt Meadows Airport is located at the junction of the Pitt and Fraser Rivers, it is 19 nautical miles east of Vancouver International Airport, about a one hour drive from downtown Vancouver. The Pitt Meadows residential/commercial area is adjacent to the northeast corner of the airport. It is classified as a local commercial airport that can support commercial air service, though it also serves other commercial and private general aviation operations (business and recreational flying) to the extent that airport systems capacities such as runway and taxiway pavement load ratings are not exceeded.

Pitt Meadows is mainly a general aviation airport. Businesses operated at the airport provide helicopter and fixed-wing pilot training, aircraft charter and specialty flying. Other services include aircraft rental and maintenance, aviation fuel, sales, telephone, aircraft storage and a coffee shop. A direct self-dialing telephone link to Vancouver International Airport provides flight planning and weather information services.

In 1985, a major expansion to the Pitt Meadows Airport was undertaken by Transport Canada, by lengthening of a runway from 2500 feet to 4300 feet thus permitting a larger range of aircraft types to use the airport.

Pitt Meadows Airport is built on 287 hectares of land and is owned and operated by Transport Canada. The airport is configured in a 'Z' formation with all runway surfaces constructed of asphalt. Most aircraft parking and services are located on the south side, with some development to the east. The air traffic control tower and other Department of Transport facilities are on the south side of the field. There is a track guidance localizer between the parallel runways which forms part of the Vancouver area airway system. A non-directional beacon is situated on airport property beside the bank of the Fraser River.

Financial information for Pitt Meadows Airport is found in Appendix 2-10.

Vancouver Harbour: Three water airports are sited on the south shore of Burrard Inlet in Coal Harbour, seven nautical miles north of Vancouver International Airport. The harbour around the seaplane facilities is bordered by the business section of Vancouver on the south and Stanley Park on the west. The balance of the harbour supports extensive maritime activities, commercial and industrial ventures.

Two of the three seaplane facilities in Coal Harbour are used in conjunction with commercial air services. The Harbour Airlines float is a base for Class 3 and 4 services while the Air BC float is used as a point of call under their Class 2 scheduled air service license. An itinerant seaplane float at the Bayshore Inn is available for passenger pick up and drop off. Customs service is available for trans-border flights.

The water area associated with these seaplane floats is controlled by the Port of Vancouver, with companies providing their own dock and groundside facilities. Fuel and oil is available at the two main sites. Each site has large concrete float systems, and trailers with company offices and passenger facilities. Both sites have private day/VFR water airport licenses. The control tower is located on the waterfront atop an office building.

An operational study would have to be undertaken to determine whether any of these required airports should be administered as part of one integrated airport management system. The decision may well be affected by the financial impact of doing so. (See Chapter 7 and Appendix 2-10.) Whatever the management structure, it is important that all the airports of the region act in a complementary and supportive manner, whether administered separately or together.

Impact of the Vancouver International Airport

Vancouver is the third largest city in Canada with a population base of 1.3 million. In recent years, there has been significant growth in the financial and management service sector of the local economy due to the province's dependence on resource based industries which require large capital investments and technical services. Vancouver is also the major export centre in western Canada with port facilities that ship bulk commodities to the Pacific Rim countries, the U.S. and the rest of the world. Especially promising, are the strong financial and social ties Vancouver has with the Pacific Rim area as this is forecast to be one of the fastest growing aviation markets in the world.

Domestic and transborder sectors are expected to experience an initial growth spurt between 1986-1991, then slow down during the following 5 years while the growth rate for the international sector is projected to remain fairly constant. Forecasted average annual growth rates for international traffic is estimated to be 4.8 percent, followed by 3.3 percent in the transborder sector and 2.7 percent in the domestic sector. The total number of emplaned/deplaned passengers is expected to grow on average by 3 percent each year between 1986-2001. Aircraft movements are projected to increase by an average annual rate of 2.6 percent.

V.I.A. dominates the local and B.C. markets and although slight erosion may occur, no significant changes are expected. Vancouver's role as a gateway for the Pacific Rim and Western Canada is expected to face stiff competition.

As an airport attracts new traffic, the economic base of the community expands. Direct jobs are created at the airport and with the airlines when new traffic comes in. In addition, there are indirect jobs in related sectors, such as with distributors and trucking companies in the case of freight, and with hotels, taxis and restaurants for passengers. These direct and indirect jobs induce further gains in the local economy through multiplier effects. Stanley Associates Engineering (1986) estimated that for every direct job created by our traffic, an additional 1.5 indirect and induced jobs will be created. Thus, the nearly 13,000 jobs attributed to VIA (Transport Canada has only 232 employees) result in a total of 29,000 jobs in the B.C. economy or 2% of the entire B.C. work force. This amounts to a $1.4 billion dollar annual contribution to provincial gross domestic product, or 3.1% of the provincial total, a share greater than fishing, metal or coal mining and equal to that of agriculture.

These impacts are not confined to the Vancouver region alone. An improvement in services offered at Vancouver also makes doing business in provincial communities connected by air to Vancouver more attractive. Attracting new tourists to the air service to the Whistler ski resort depends critically as to how well Vancouver is linked to important "skier generating" markets in the U.S. Capital projects at VIA are often awarded to B.C. contractors outside of the immediate Vancouver area.

VIA is increasingly a central cog in the provincial transportation system. With air freight growing rapidly as a mode of transport for more and more trade and tourism from the Asia Pacific countries hinging on the quality and number of airlinks, VIA is important to all British Columbians.

Chapter 3: The Challenge Part One: The Air Transport Revolution

Airline deregulation, "liberal" bilateral treaties, airline mergers, free trade, intermodal links, aircraft technology - all have converged on the air transport industry to create a revolution in the way business is carried out. These changes are occurring on a global scale and are dramatically altering the routings patterns and commercial relationships of air carriers, not to mention the expectations of cargo shippers and airline passengers alike.

To be competitive in the new air transport system, Vancouver International Airport must recognize the changes and appreciate their implications. VIA is not an entity by itself, but rather a "node" or part of a complete set of logistical systems for the movement of passengers and freight. As forces, such as deregulation, effect strategic shifts in logistical patterns, these shifts threaten significant portions of Vancouver's existing traffic base. They also create new opportunities. Our challenge is to identify what strategies Vancouver can pursue to protect its traffic and exploit these new opportunities.

The Airport as Part of a Logistical System

The services of an airport are not an end product that can be sold by advertising in a trade magazine. Rather, the airport is only one piece of a greater logistical system. It is this complete logistical system that shippers or passengers choose to use, not just pieces of it. To be successful, VIA must pay special attention as to how it fits into the overall logistical system. Logistics (or physical distribution management as it is also known) is the integration of two or more activities (for the purpose of planning, implementation and control) governing the efficient flow of goods and materials. It recognizes, for example, that while transportation costs can be reduced by shipping in car loads rather than truckloads, it may be undesirable from an overall point of view as the larger inventories of the carload will require more capital, warehouse space, financing, etc. Interestingly, the field of logistics began with a 1956 study of airfreight. This study showed how the high costs of air relative to surface freight can be more than offset by reductions in inventory and warehouse costs made possible by the faster and more reliable service.

While logistics is normally thought of in terms of freight, it also applies to passenger traffic. Business passengers are concerned only with getting from origin to destination on a timely basis. Before deregulation, much of the U.S. was served by non-stop, but often infrequent, air service. Since deregulation, airlines are providing (and travellers are preferring) more frequent, one stop routing through major hubs. Most travellers feel that the "cost" of increased flight time is more than offset by the "benefit" of more frequent service. Tourists also purchase complete logistical packages. For example, tourists from Japan may wish to see the Rockies and spend some time shopping in a large city. They may be indifferent between a package which routes through Vancouver and one that routes through Seattle or Calgary.

In the area of freight, logistics is playing an increasingly important role in corporate strategic planning. This is because the logistics system directly affects the level of customer service offered. Logistical planning frequently uses the tool of "total cost analysis" in contrast to setting up the distribution functions (such as warehousing, transport, etc.) as separate and independent cost centres. The logistics concept has enabled many firms to gain strategic advantages over competitors and has significantly lowered distribution costs. An example is the "just-in-time" inventory practice.

Air Transport Logistics and Economic Development

An airport, as part of a logistical system, facilitates the flow of goods and people into and out of a region. It can also act as a transfer node (or an intransit node) between two very distant regions. An airport is also an intermodal facility, transferring passengers or freight from one mode of transport, air, to another, usually motor transport. An airport competes with other logistical systems. For example, air freight can fly to Seattle and then be trucked to a firm in Vancouver as an alternative to flying into VIA and using a local truck for delivery.

Because of its proximity, the Seattle-Tacoma (Sea-Tac) airport is usually regarded as Vancouver's major competition for Pacific Rim business. It is instructive, therefore, to analyse their marketing techniques. They do not advertise their airport. Rather, they identify airport users (shippers and wholesalers) and endeavor to understand their needs and costs. Sea-Tac then attempts to put together a complete logistical system for the user. If necessary, they will modify the airport's operations and resources to meet the needs of a shipper and bring in new traffic. This approach requires a strong entrepreneurial spirit. Sea-Tac has used the logistical concept to build several innovative markets. One example is a combined ship-air service from the Far East to Europe. Some items, such as fashion apparel, do not require the 2-3 day air service available from Asia to Europe, yet need a service faster than the three week shipping schedule. Sea-Tac has been successful at constructing a ten day Asia-Europe service. Shipments come by sea to Seattle, which, like Vancouver, is eight days sail from Japan (rather than 9-10 days to San Francisco or Los Angeles). Cargos are then transferred from the port to the airport for shipment by air providing the required 9-10 day Asia-Europe service.

Sea-Tac has taken traffic from the Vancouver area, in part because the port of Vancouver (indeed much of the Vancouver economy) is perceived to have significant labour problems which interrupt time sensitive shipments. VIA could regain some of this traffic, but it would require more than just advertising VIA. A complete, smoothly running logistical system must be set up and marketed.

Passenger movements can also be considered as part of a logistical system. As an example, a large portion of Japanese tourists are young females, fresh out of school. They tend to be concerned about personal safety and thus like to travel in groups. To be attractive to this market, the airport cannot be sold by itself to tour operators. Rather, it must be sold as a piece of a logistical system which includes accommodations, meals, shopping, and sightseeing in groups. Many potential tourist destinations in our area are lacking one or more of these dimensions for handling (Japanese speaking) groups.

How VIA is Part of a Logistical System

To illustrate how VIA fits into a broader logistical system, consider the traffic routing for an "off-line" (i.e. non hub) point, such as Taipei in Asia, to an off-line point in South America, such as Quito. The routing pattern using Vancouver requires no fewer than five stops, a minimum of three airlines and, depending on the day of the week, 2-4 days travel. Currently, Vancouver benefits from a considerable amount of such "in transit" traffic. One airline serving Asia from Vancouver blocks off 20% of its seats for Asia traffic going through North America for passengers ultimately destined for either South America or Europe.

However, there is no guarantee that this current traffic will exist in the future. Travellers will respond immediately if routings become available which eliminate one or more stops. It is technically possible to fly directly from Tokyo to

Toronto. This eliminates one stop and considerable flying time. Indeed, most Asian, European and even Canadian airlines do not hide their wish to obtain access to Toronto in future negotiations. If the Government of Canada grants such rights, it will definitely be to VIA's detriment. It must be recognized that VIA's existing role as Canada's Pacific Gateway is threatened and its future success depends on the airport developing new routing systems, such as establishing itself as the link between the Pacific Rim and South America. Many of these new routing patterns are likely to be opposed by some Canadian interests and, hence, VIA must become an active advocate in international route negotiations.

The Asian-South American routing system is just one example of the possibilities for VIA. The example applies equally well to Asia-Europe, Asia-Central America, and Asia-U.S. traffic systems.

As stated earlier, the entire logistical package has to be sold to the international markets, and not simply the airport alone. An exciting prospect would be to find and develop niches for the entire logistical system to exploit. All parts of the logistics system must work together to attract and handle specific types of cargo better than any of its competitors. For example, the attraction B.C. seafood has for world wide markets could result in specialization in transporting live fish. Problems between differences in types of storage equipment and handling procedures among the different modes (water, truck and air) would have to be resolved.

To pursue development of logistical niches, VIA will need to adopt a radically different approach to marketing. Any marketing program must be targeted at ultimate users (e.g., shippers and tour packagers), not just to sell them the airport, but to listen to their needs and costs. Innovative thinking that reaches beyond the airport into the whole logistical system is required. Cooperative joint problem solving is required, not a take it or leave it attitude. The individuals chosen for this task must be steeped in the ways of marketing, not merely facility planning.

The main lessons for Vancouver are simply stated. First, forces exist that will set up new logistical systems and divert traffic from Vancouver. Second, Vancouver needs to develop and put into action ideas for new logistical systems which will retain existing traffic and develop new traffic. Third, some of the actions which VIA needs to undertake cannot be done in a federal airport system but must be specifically created for the unique Vancouver situation.

The Economic and Policy Environment

Trends in Air Traffic

There has been tremendous long-term growth in Canadian air traffic. From virtually a non-existent industry in 1950, Canadian air traffic has grown to 22 billion revenue passenger miles flown in 1984. Air cargo has grown at about the same rate, with 1.2 billion pounds moved in 1984.

Internationally, air cargo has grown at a faster rate than passenger travel. While Europe and North America currently dominate the air freight market, these markets have matured and currently have the lowest annual growth rates (8.7% and 5.2% respectively). The Asia-Pacific market has the highest growth at 19.9% per year, followed by Africa (13.9%), the Middle East (11.5%), and Latin America(10.9%). The growth of the air cargo market cannot be ignored, and VIA must pay close attention to the fast growth markets. Appendix 3-1 illustrates the growth of Canadian air transport and Appendix 3-2 the required distribution of international air freight.

Locally, Vancouver's airport has experienced high growth in turbo-prop aircraft, a steady number of jet aircraft movements, and a decline in small piston aircraft. However, it should be noted that piston engined aircraft still account for the most take-offs and landings. Further reductions in piston aircraft could easily occur, allowing for future growth in jet and turbo-prop landings of VIA. These trends are illustrated in Appendix 3-3.

Trends in Technology

Airports are directly affected by changes in aircraft technology. For example, when jets were first introduced in the late 1950s, many airports did not have runways capable of handling them. The introduction of wide body aircraft required some airports to upgrade terminals and other groundside facilities to handle the larger peak hours of traffic. Airports are also affected by developments in logistics technology, such as aircraft loading systems and computerized cargo tracking systems.

Aircraft Technology. On the horizon in the early 1990s is the new, advanced turbo-prop aircraft which will start to phase out some jet aircraft. The proposed Boeing 7J7 aircraft will reduce operating costs, primarily through fuel efficiencies for 150 passenger aircraft. This should translate into a reduction in airfares. These aircraft will significantly reduce the noise impact on the surrounding community. The aircraft will not require longer runways. In terms of the impact of these aircraft on airports, the lower operating costs will stimulate air travel demand and the noise reduction will have a favourable impact on the community.

Another change to expect in the 1990s is introduction of aircraft with 600-700 seats, primarily variants of the Boeing 747. These aircraft could strain existing groundside facilities, such as lounges, check-in areas, customs, etc. In the far future, aircraft manufacturers are contemplating hyper-sonic aircraft which will travel in the range of 5,000 to 10,000 miles per hour, bringing places such as Japan and Australia within hours of North America. This technology is only speculative at present and would likely require major redesigns in airport facilities such as runways.

Logistics Technology. Already several innovations are available on the market, although they have yet to be implemented in Vancouver. Lufthansa has cited lack of main deck cargo lifters as a factor in channeling freight traffic to Seattle rather than VIA. Many world class airports have computerized cargo handling facilities. Some, such as Zurich, have automated cargo movement facilities providing carriers with further efficiencies. With the advent of logistical philosophies, such as Just-in-Time production (goods produced and shipped to retailer as required thereby eliminating warehousing inventory) state of the art logistical facilities are essential to attracting the increasingly sophisticated multinational shippers.

Trends in Economic Activity and Population

The size of a country's air travel market is heavily dependent on both the country's population and the strength of its economy. Before VIA decides which countries are to be its key target markets, it must analyze the long-run economic and population trends that are occurring throughout the world. At present, Vancouver's focus is on the Asia Pacific Rim. This is because of the high economic growth rates of countries such as Korea and Japan.

However, there is more to the Pacific Rim than just the Asian success stories. The South and Central American markets are becoming increasingly important. For example, the Brazilian economy has for some time been growing at a very fast rate. Mexico, despite the plunge in oil prices, has seen its economy grow significantly. These high economic growth rates, combined with large populations and population growth rates demonstrate that the key air traffic markets of the future may not be confined to Asia Pacific Rim countries.

Political Change: Deregulation of the Airlines

The U.S. deregulated its airline industry in 1978. Canada has been evolving toward deregulation since 1979. The National Transportation Act of 1987, which was given Royal assent in August, will totally deregulate southern Canada on January 1, 1988. Deregulation and its implications for air carriers and consumers has been discussed quite extensively elsewhere. Appendix 3-4 provides an historical overview of deregulation in the U.S. and Canada. Some of the implications of deregulation for Canadian airports are:

- Deregulation has caused a shift towards hub-and-spoke networks by the carriers. This implies greater traffic and peaking problems at hub airports such as Vancouver. This, in turn, could cause capacity problems on the ground and in the air.

- Air carriers are reducing use of large, wide-body aircraft such as Boeing 747s and Lockheed L-1011s. Air carriers are replacing wide-body service with more frequent service in smaller aircraft. This implies greater airside traffic and congestion.

- The airlines are dropping jet service at small communities and replacing it with turboprop service, generally provided by an affiliated carrier.

- The jet airlines wish to handle small feeder planes contiguous with the big jets. They do not want the commuter/feeder aircraft at a separate terminal. This is in direct contrast with current VIA plans for a separate commuter terminal. It also raises questions regarding the future use of the South Terminal and the viability of feeder service using runway 88 (i.e. seaplanes).

- Airlines now operate complexes, or a timed bank of inbound or outbound flights. This adds to peaking problems at the airport, both at the airside and groundside. Airlines also will need a large number of gates to handle the complexes. Terminal expansion has been required at most U.S. airports.

- Airlines insist on having contiguous gates, and having gates for affiliated feeder lines contiguous to their own.

- The low fares brought about by deregulation increase traffic, potentially beyond current airport capacity.

- As deregulation's low fares have developed the discretionary travel market, air transport activity will be fed much more closely to the ups and downs of the economy. This will result in volatility of airport revenues, and severe capacity problems during the peak of the business cycle.

A related issue is that of airline mergers and their implications. In the U.S., such mergers have resulted in the consolidation of operations of former competitors, resulting in reduced activity at certain airports. The merger of PWA and CP Air (etc.) to form CAIL has already witnessed some consolidation of schedules on routes such as Vancouver-Calgary. This particular merger also raises questions as to whether CAIL's operations will be based in Vancouver, Calgary or Toronto. A recent Air Transport World article (September, 1987) quoted senior CAIL officials as stating that Toronto is the natural base of operations for CAIL. Although the carrier has a commitment to Vancouver, the long-term economics could force an eventual move of CAIL operations to Toronto. This could involve maintenance facilities, corporate office staff and functions, as well as gateways for key international routes. In contrast, the acquisition of Air B.C. by Air Canada frees Air B.C. to pursue opportunities through B.C. and Alberta. This should result in an expansion of activity at VIA.

Political Change: Privatization of the Airlines

Worldwide there has been a move towards the privatization of air carriers. This is predicated on the belief that an aggregate shift in economic benefits will develop from a privately owned, market oriented industry which maximizes producer efficiency and consumer welfare. Privatization and deregulation are often closely related. Internationally, British Airways (U.K.), MAS (Malaysia) and Korean Airlines are examples of airlines which have been privatized. Austria and Japan are also considering the selling of their national airlines.

In Canada, there too has been a move towards privatization. Federal or provincial ownership of PWA (Alberta), Nordair (Federal) and Quebecair (Quebec) has been sold to the private sector and now all three of these are part of CAIL. Similarly, Ontario is considering selling its stake in the NorOntair commuter system. The Federal government has been considering privatizing Air Canada. Though these proceedings have been put on hold, there remains substantial interest both within the airline and within the government for the privatization of Air Canada. Privatization is generally more efficient which will lead to a reduction in costs and improvement of service both domestically and internationally. This, in turn, will stimulate air traffic.

Political Change: Free Trade

Both Canada and the U.S. have taken positions advocating free trade in air transport, although this appears not to be included in the present trade agreement. Canada wants both U.S. and Canadian carriers to be free to fly anywhere in North America, including an ability for Canadian carriers to fly between U.S. cities (a right referred to as "cabotage"). The U.S. favours a more restricted free trade market, confining freedoms only to routes between the U.S. and Canada. This would exclude cabotage. Appendix 3-5 provides more details of the negotiations between the U.S. and Canada.

The move to free trade in air transport would have important implications for VIA. In the United States there is an established hub and spoke network. Canada lies on the edge of this network. It is conceivable that in a comprehensive free trade system some Canadian cities could be better served via U.S. hubs and this could result in the reduction of non-stop east-west links in Canada. On the other hand, some American cities may be better served from Canada. Comprehensive free trade could also initiate the loss of hub status at Canadian airports. In particular, the Vancouver International Airport might act simply as a feeder airport to such North American hubs as Seattle. On trans-pacific flights Vancouver has a slight geographic advantage over Seattle. This could result in a shift of activity to Vancouver at the expense of Seattle. This, however, is complicated by the fact that bi-lateral agreements with specific nations would have to be re-negotiated.

Air transportation could also be affected by the general free trade agreement currently being debated. Free trade will change trade patterns and the location of industries. The natural trading patterns in North America are North-South, due to geographic barriers such as eastern and western mountain ranges, the Canadian Shield, etc. Canada has been able to distort this to an East-West pattern by the use of tariffs. Their removal will result in the natural patterns re-emerging. This will result in a loss of trade from Vancouver to central Canada, and an increase to U.S. Pacific states. This could serve to reinforce the tendency to reduce the importance of Vancouver as a domestic hub and instead make it the end of a spoke from Western U.S. hubs. The loss of East-West air traffic would be offset to some extent by increased North-South traffic, but VIA would have considerable difficulty in establishing itself as a major North American hub. However the free trade issue is resolved, it will most certainly create new challenges, and opportunities, for VIA.

Institutional Constraints: International Air Bilaterals

Should VIA embark on a plan to exploit the growth of Pacific Rim trade, it may wish to invite new foreign air carriers to commence service here. Unfortunately, international air transport has not been deregulated. Foreign carriers cannot commence service until Canada and the corresponding country have negotiated a bilateral air services agreement explicitly providing for service to VIA. These bilateral agreements are required because states have sovereignty over the air space above their own countries and because there is no widely ratified multi-lateral agreement allowing the airlines of one country to transport the passengers or cargo to a second country without the permission of the second country. It is the bilateral agreement which defines the terms under which international commercial air transportation is conducted and it often takes a considerable length of time (years or even decades) to negotiate. The negotiations for the bilateral treaties are often influenced by other (non-air transport) foreign policy concerns.

With respect to the Vancouver International Airport, there can only be an increase in Pacific Rim air transportation and Pacific Rim trade if there is an expansion in the number of foreign carriers serving the airport. This will require the federal government to negotiate new bilateral agreements and it may require the airport authority to adopt a position contrary to the interests of the Canadian air carriers. Several important Asian carriers are expanding into North America (e.g., Singapore; Korean; Thai; Japan Airlines as well as its competitors, Nippon and TOA a new Japanese cargo carrier; Thai Airlines). If they are frustrated by negotiations from obtaining access to VIA, then they will simply establish operations elsewhere (Toronto, Seattle, LA, SF, NY). This will be quite detrimental to the economic development of Vancouver, and to its potential role as a centre for Pacific Trade.

When (non air transport) firms choose a location for offices and industry, they are strongly influenced by the availability of frequent and direct air service. If Vancouver only offers indirect connections (perhaps via congested and expensive Narita airport in Tokyo) and these are only offered a few days a week, then they will locate elsewhere. The importance of having direct, frequent air service cannot be stressed enough. The location decisions of multinational and international trading firms is heavily influenced by it. VIA could be left in the backwaters of the growing Pacific Rim economy if it fails to take an active role in soliciting new airline services. The North American airports are now in a competitive mode, and active airport marketing groups will capture the new traffic and thus, the Pacific Rim oriented economic development. Appendix 3-6 provides information on current Canadian air transport bilateral agreements.

North American Logistical Patterns

World Air Traffic

On a worldwide scale, there has been a dramatic increase in both cargo and passenger air traffic. Over a ten-year period, 1976-1986, the amount of international freight tonnes carried increased an average of 7% per year. Similarly, world passenger traffic increased an average of 5% over the same period. In air cargo transportation, an increase of 8% for the amount of freight tonnes carried during 1986 indicates a worldwide recovery after the poor 2% growth rate during 1985. North and mid-Pacific routes showed strong growth of 17% in 1986. The trend on these Pacific air transport routes appears to be moving back towards the exceptional growth recorded in previous years. Similarly, there was rapid growth in air transport during 1986 on the Europe - Far East routes with an increase of 17% over the previous year. 10% of the total International Air Transport Association's cargo was carried on this route during 1986. Within Europe, there was an increase of 6% in the amount of freight tonnes handled over 1985. This increase is 2% higher than the average growth rate during the 5 year period 1981-1985.

Trends in air cargo transportation by route area, detailed route area information and shares in regional growth are presented in Appendices 3-7, 3-8 and 3-9 respectively. Air passenger transportation has also experienced an increase but it is much smaller than the increase for cargo. During 1986, 200 million passengers were carried on internationally scheduled services. Passenger kilometers flown increased by 1% while capacity increased by 4%. Regionally, the greatest growth trends occurred in markets to South and Central

America, and markets in the Pacific. Appendix 3-10 presents the trends in air passenger transportation by route area for 1986 and Appendix 3-11 presents more detailed route area information.

Domestically, more than 750 million passengers were carried worldwide during 1986. This represents an increase in air passenger transportation of 7% over 1985. Outstanding growth was recorded within the U.S. (12%) as well as in Brazil and Australia. Domestic Charter services increased globally by 12%.

North America's Role

The current worldwide trends in air transportation place North America at the strategic forefront. Exciting changes and shifts in current routing patterns are affording North America new opportunities to explore and develop. Of most importance are the Asian, South America, Asia-South America and Asia-Europe markets.

Over a 10-year period, all airports experienced strong growth in international cargo. (See Appendices 3-12 and 3-13). Total cargo growth, however, shows a markedly different pattern. Whereas Toronto and Vancouver showed strong growth, other airports did not. In Canada, the international portion of air cargo has remained unchanged, 41% in Toronto in 1975 and 1985, and 25% at Vancouver. Appendix 3-14 shows the growth of freight at the Vancouver International Airport over the period 1975-1985. While the 1975-85 figures show strong international cargo growth at most airports, an examination of recent trends shows a different pattern. The traditional gateways of JFK (to Europe) and Miami (to South America) show almost no growth. Los Angeles, (the traditional gateway to the Pacific) has had increased cargo traffic, largely due to the overall growth in the Pacific economies. Interior cities have shown the strongest growth in international cargo. Vancouver's growth in international cargo for this period, 13%, is less than half that of Toronto, 28%, and well below the trend for the interior communities in the U.S.

Appendix 3-15 presents detailed information regarding freight to and from North American airports. Vancouver could act as a general transfer point in the strategic logistical systems for west coast North American airports between the Orient and Europe, the Orient and South America, and the Orient and interior North America. At present, however, only two of the top ten cargo carriers (JAL and British Airways) offer regular service to VIA.

Appendix 3-15 also illustrates directional imbalances in cargo traffic. For example, the Vancouver-Hong Kong cargo traffic is only 42% of the Hong Kong-Vancouver traffic. Vancouver-Nadi is only 3% of the reverse flow. In fact, every Pacific route to Vancouver has much greater inbound traffic than outbound traffic. From Vancouver to Europe, the opposite occurs. Every route has more outbound traffic. Outbound London traffic is 158% greater than inbound, for Frankfurt it is 43% greater and for Amsterdam, 29%. As a combined total, inbound tonnes are only 1% higher than outbound tonnes at Vancouver, but the traffic is unbalanced. This imbalance in traffic indicates opportunities which may exist. Carriers may be willing to offer good rates on cargo outbound from Vancouver to Asia and the Pacific Rim. Perhaps our emerging aquaculture industries could take advantage of this. CAIL recognizes the traffic imbalance and operates (with Flying Tiger) on around-the-world service. An aircraft originating in Asia flies to North America. Rather than return to Asia, it picks up new traffic and continues to Europe, where it eventually makes it back to the Far East. VIA may be able to cooperate with one or more of the major cargo carriers, for example, Lufthansa, and build an around the world logistical system incorporating Vancouver.

Opportunities also exist on the passenger side. Appendices 3-16 and 3-17 indicate passenger routings at major airports and appendix 3-18 lists the carriers offering scheduled passenger services on these routes. At VIA, traffic to the Pacific is 36% greater than traffic to Europe, clearly establishing its Pacific Rim orientation. However, its Pacific traffic is only 14% that of Los Angeles and 28% of San Francisco indicating the opportunities for significant growth is there. At present only three of the top ten airlines in terms of passengers or revenue passenger kilometers (JAL, British Airways and KLM) serve VIA.

Vancouver's Role

Vancouver International Airport finds itself in a position at the crossroads between dramatically changing route patterns in international air transport and changing philosophies regarding federal government airport policy. Appendices 3-16 to 3-18 have already shown in detail VIA's passenger traffic. Appendices 3-19 and 3-20 give VIA's ranking in air freight handled versus selected Non-North American Airports. This information shows that Vancouver is a minor player compared with freight centres such as Tokyo, Frankfurt and London. Even Toronto handles over four times as much international freight as VIA. Shifts in logistical patterns are prescribing that Vancouver become a strategic 'node' offering competitive advantages within the greater logistical system for the efficient movement of passengers and freight.

Pacific Rim traffic is growing faster than any other market. Vancouver is in a position to capture some of this growth, thereby ensuring that VIA remains competitive in the North American logistical system. One stop routing from the Pacific

Basin through to major hubs in the U.S., Europe and South America must be developed. For cargo, a good transportation, communication and warehousing network needs to be developed for the efficient transfer of goods. For passengers, VIA must develop as part of a logistical system which packages accommodation, sightseeing and local amenities (theatre, shopping, outdoor adventures). The opportunities are there to be seized.

The Implications of Deregulation and Liberal Bilaterals for Logistical Patterns

Government policy changes can have a profound effect on the traffic-generating capability of its country's airports. During the late 1970s, the United States changed its air transport policies when it deregulated its domestic air transport system and adopted a pro-competitive international air transport policy. Both of these policy changes resulted in dramatic shifts in passenger flows in that country. Canada, in 1987, is following the U.S. lead by deregulating its domestic air transport system (in Southern Canada) and moving towards a more competitive international air transport policy. What will this mean for VIA? By examining the winners and losers from recent regulatory developments in North America we can perhaps predict how these developments will affect VIA in the future. In 1978, the United States passed legislation allowing for a "phased-in" deregulation of its domestic air transport system by 1984. One of the major results of U.S. domestic deregulation, as is well known, was the creation of "hub and spoke" systems by major U.S. airlines. The U.S. airlines developed one or more hubs in major cities and began to feed traffic through these hubs. This allowed the airlines to discontinue thinly-travelled long-distance "milk-run" routes, and replace these routes with direct flights into their hubs with on-line connections to other cities in expanded route networks. The hub and spoke system is graphically illustrated in the North American route map of United Airlines found as Appendix 3-21.

The newly-formed "hub-cities" were not only able to attract increasing numbers of domestic flights, but more international flights, as well. This was made possible because the U.S. government signed new "liberal" bilateral agreements with a number of countries, allowing international flights into more U.S. cities. Previously, international flights (aside from transborder flights) were generally restricted to a few coastal cities, such as New York, Los Angeles and Miami. Since 1978 the number of additional gateways in each new bilateral has increased to as many as ten. The cities chosen for the new gateways were generally the same cities as those that became the major hub cities in the U.S. domestic system. Appendix 3-22 shows fifteen of the countries with which the U.S. signed new agreements, and the number of new gateways gained by each country.

Although the Canadian domestic air transport industry is only a fraction the size of the U.S. industry, with domestic deregulation, a hub and spoke system has also been developing in this country. Vancouver, at present, is reasonably well positioned as a "west coast hub" for Canadian Airlines International. However, in order to achieve a high rate of growth in the future, Vancouver must also build its international traffic base. This will mean competing against west coast U.S. cities for Pacific traffic and other major Canadian cities, most notably Toronto, for international traffic. Toronto is well situated as Canada's central hub city, has good international connections and has been increasing its share of major Canadian airport traffic. With new technology and a more liberal attitude to bilateral negotiations, Toronto could be in a strong position to compete with Vancouver for Pacific Rim traffic. It could be noted that Canada has, in fact, taken a first step along the liberal bilateral path by recently signing an agreement with the United Kingdom that allows the airlines of either country to serve any city in the other country.

While it is always dangerous to generalize based on the experience of other countries, it must be recognized that these are generally global trends and Canadian policy will have to respond if our airports and air carriers are to remain competitive internationally.

Appendix 3-23 contains a detailed analysis of the passenger and cargo growth rates of J.F.K. in New York City, Dallas-Ft.Worth, Atlanta and Toronto since the late 1970's. JFK is an important coastal airport and major port of entry into the United States. Dallas-Ft.Worth and Atlanta are both domestic "hubs" in the deregulated domestic air transport system. Experience shows graphically that while the coastal point of entry at JFK has experienced a steady decline in cargo and passengers, including its share of international traffic, the domestic hub cities have experienced a growth in international routes and passengers. Toronto, meanwhile, has been able to increase its share of both cargo and passengers, largely at the expanse of Montreal, and consolidate its position as a major "hub" in Canada.

The lesson to be learned is that being a coastal port of entry is no guarantee of future Pacific Rim international routes or business growth. Inland domestic hubs can add significantly to their international routes if permitted by bilateral agreements to do so and, given Toronto's growth as a domestic hub in Canada, Vancouver must develop the same agressive marketing approach as its competition to achieve growth at VIA and, consequently, in its regional economy.

Vancouver: A Closer Look

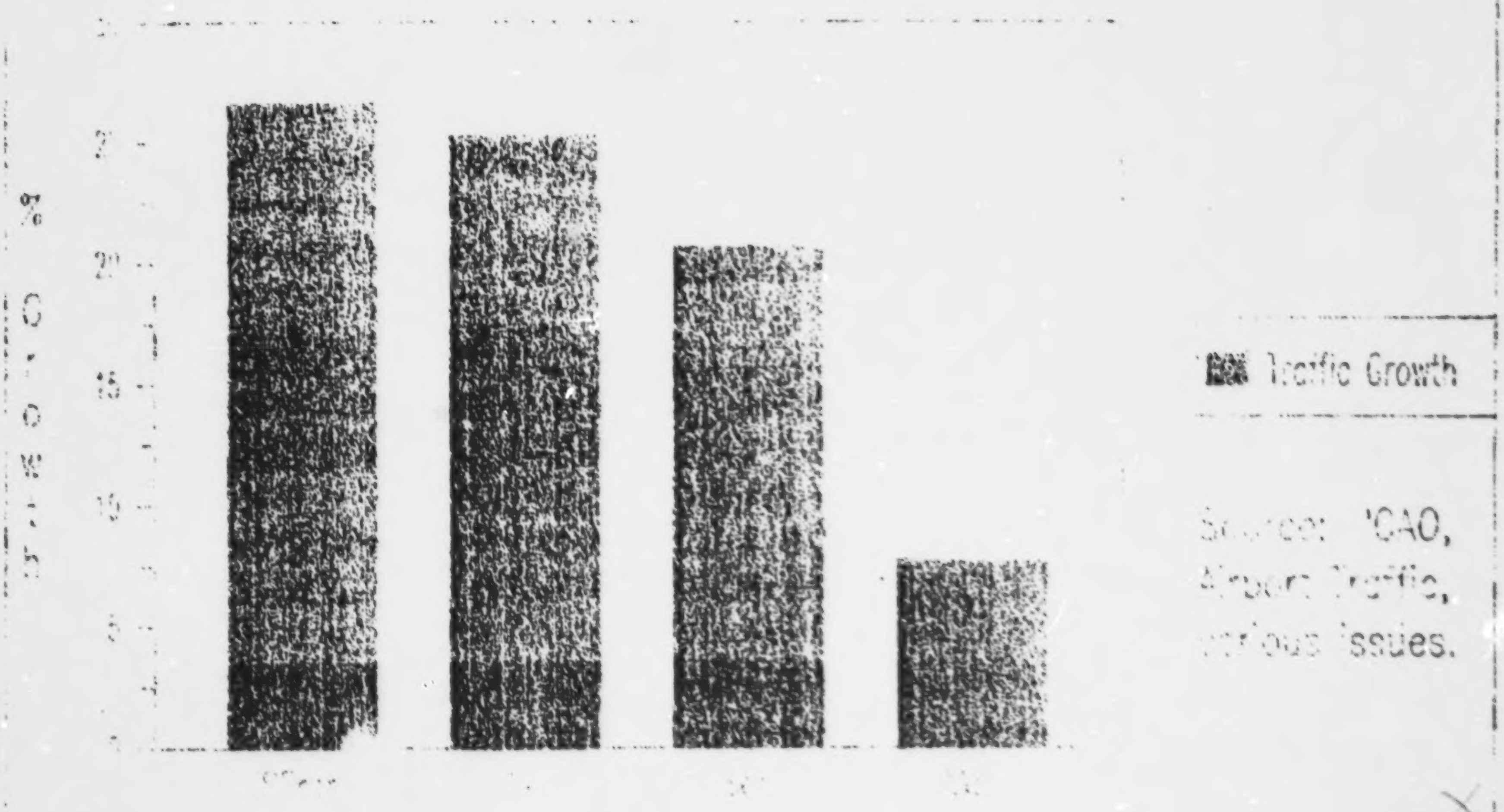
Vancouver is currently positioned as Canada's major Pacific regional hub and as Canada's port of entry for Pacific flights. However, Vancouver's record over the last two decades at generating traffic has not been good. Appendices 3-24 and 3-25 show that Vancouver's share of passenger and cargo traffic of Canada's major airports has been relatively stable since 1980, after increasing slightly between 1970 and 1980. As of 1985, Vancouver's share of passenger traffic stood at 23 percent and share of cargo traffic stood at 20 percent.

Vancouver's share of Canada's international traffic has also remained relatively stable over the past several years. Appendices 3-26 and 3-27 show the changes in Vancouver's share of international passenger and cargo traffic, generated at major Canadian airports, between 1975 and 1985. During the time period, Vancouver's share of international passenger and cargo traffic increased marginally from 15 to 16 percent and from 11 to 12 percent, respectively.

Vancouver's failure to substantially increase its international traffic share can also be illustrated by how the airport has fared in relation to other Pacific coast airports. The table following, reproduced as part of Appendix 3-28, compares the percentage increase in international passenger traffic for the years 1982-1985 at Vancouver with the increases at Seattle, San Francisco and Los Angeles. It can be seen that Vancouver had only an 8% growth in international passenger traffic during the period, compared to increases of 21 percent in Seattle, 26 percent in Los Angeles and 25 percent in San Francisco. Not only is Vancouver showing smaller increases in international traffic than its Pacific competitors, but it is more dependent on this international traffic than the U.S. cities. Appendix 3-29 shows that whereas international traffic comprises between 8 and 16

International Passenger Changes

[illegible]



Source: ICAO, Airport Traffic, various issues.

percent of total traffic for the Pacific U.S. airports, it makes up about one-third of Vancouver's total traffic.

Finally, Appendix 3-30 indicates that although growth rates in total international traffic have been flat in Vancouver during the 1980s, overseas international traffic has increased during this period. Overseas scheduled international traffic, in fact, increased by 42 percent between 1980 and 1985, offsetting declines in transborder traffic and international charter traffic. The increase in overseas traffic was helped by the institution of new Pacific services (e.g. Cathay Pacific and Canadian Airlines non-stop to Hong Kong) and new services to Europe (e.g. Canadian Airlines non-stop to Amsterdam), as well as through increased traffic on existing routes.

In summary, Vancouver, has managed to maintain, but not substantially increase, its share of traffic during the 1980s. Increases in international traffic at Vancouver have been below increases at major U.S. Pacific airports. The major source of growth in international traffic at Vancouver during the 1980s has been overseas scheduled traffic. Given that Vancouver relies on international traffic for almost one-third of its business, it will likely have to do a better job in attracting this traffic if it wants to achieve strong growth rates in the future.

Regulatory Developments and Future Growth at VIA

Vancouver must compete strongly with other major Canadian and U.S. airports for business if it is to achieve high growth rates in the future. However, the ability of Vancouver International Airport to attract new airlines, more routes, and greater numbers of passengers depends, in large part, on government air transport policy and regulations. Changing U.S. regulatory policy has strongly influenced traffic patterns in the United States and changing Canadian policy will likely do the same in this country. It would be helpful, therefore, to review the state of Canadian air transport regulatory policy and to make predictions as to future developments.

Domestic Policy. The thrust of federal government action, over the last decade, has been towards liberalizing the economic regulations governing domestic air transport. The effort has culminated with the passage of Bill C-18, the new transportation legislation, which will deregulate air transport in Southern Canada.

The Canadian airline industry re-aligned, in anticipation of the passage of Bill C-18. Two large airlines -- Air Canada and Canadian Airlines International -- now dominate the industry. The airlines have followed the lead of their U.S. counterparts and realigned their route networks into hub and spoke systems.

What do these developments mean for Vancouver International Airport? The realignment has maintained Vancouver's current position as a Pacific regional hub for Canadian Airlines International and, through Air B.C., helped Air Canada to establish a hub in Vancouver. This suggests that Vancouver International Airport will generate increased amounts of traffic from smaller airports in the province. Passengers travelling from small communities will "hub" in Vancouver for connections to other cities in Canada and abroad. Given the limited size of the British Columbia market, this will likely mean only modest increases in traffic at Vancouver International Airport.

Transborder Policy. Negotiations between Canada and the United States to replace their bilateral agreement, signed in 1966 (and amended on several occasions), have been ongoing for several years. The current agreement restricts transborder routes to those specified in the agreement, and requires airlines to submit prices for approval of both governments. Both governments have made recommendations to liberalize transborder regulations, but no comprehensive agreement on the exact form of liberalization has been reached. Two minor agreements were, however, reached in 1984. One agreement allowed freer transborder movement of commuter-sized aircraft on transborder routes with origins or destinations in smaller cities. The second agreement allowed each country to designate one airport to receive air transport, free from government price regulation. Under the second agreement, the United Staes designated San Jose (Canada designated Mirabel), and this allowed Air Cal to offer low-fare travel between Vancouver and San Jose.

Appendix 3-31 lists the authorized transborder routes from Vancouver (and from Toronto for comparison purposes), as outlined in the Canada-U.S. bilateral. While Vancouver has good connection to U.S. West Coast cities, it has poor connections to the growing U.S. inland hubs. The only major inland hub route from Vancouver is to Chicago. Vancouver offers non-stop service to only the following U.S. cities: Chicago, Honolulu, Los Angeles, Portland, San Francisco, Seattle, Spokane, Bellingham, New York, and San Jose.

What does this mean for Vancouver International Airport? VIA is currently at a disadvantage vis a vis its U.S. Pacific coast competitors because of its poor connections to major U.S. centres. Transborder restrictions, for example, preclude non-stop routes between Vancouver and major U.S. hubs, such as Atlanta, Denver and Dallas-Ft. Worth. A more liberal agreement with the United States, which allowed greater numbers of transborder routes and gave airlines a right to freely set prices, would likely increase the transborder traffic out of Vancouver. Not only would it serve to generate new transborder traffic, but it might also stem the diversion of traffic to airports in Bellingham and Seattle.

International Policy. In order for an airline to operate an international route, there must exist a bilateral agreement between the country where the flight departs and the country where the flight terminates. As of June 1987, Canada had bilateral air services agreements with 42 countries. These agreements are listed in Appendix 3-32. Note that Canada had signed bilaterals with only 9 countries in the Asia/Pacific region, including Hong Kong. A tenth, Thailand, has now been concluded. This region is the primary source of overseas international passengers for Vancouver International Airport. Canada has no bilateral agreements with major Asian countries, such as Korea, Indonesia, Taiwan and the Phillipines. As well, the Canadian agreement with Japan is over 20 years old and is fairly restrictive in allowing increased routes between Japan and Canada.

Appendix 3-33 specifies the cities that may be used by airlines operating Canadian international routes, according to the bilateral agreements. Canadian airlines can generally operate international routes from any point in Canadian territory, while foreign carriers are restricted to specific Canadian cities. However, two key Pacific bilaterals -- Japan and Australia -- preclude even Canadian airlines from operating out of cities other than Vancouver. New agreements with Japan and Australia, should they be drafted, would likely allow Canadian (and perhaps even foreign) carriers to operate routes out of Toronto, thus diverting passenger traffic from Vancouver.

Recent Canadian international policy changes pose both threats and opportunities to business at VIA. One major change has been Canada's decision to seek, at least in some cases, bilateral agreements with flexible route entry provisions.

The agreement, recently signed with the United Kingdom, is an example of such a bilateral. It is understood the U.K. bilateral allows airlines of either country to serve any city in the other country. If additional agreements, such as this one, are signed with European countries, Vancouver might benefit by obtaining more Polar routes. However, if liberal agreements are signed with Pacific countries, airlines of these countries could choose to by-pass Vancouver and fly non-stop to Toronto, with its better connections to the U.S., Latin America and Europe.

A second policy change will likely present opportunities to Vancouver. The federal government has recently announced plans to abandon its "spheres of influence" policy, which has divided the world into two spheres -- one for Air Canada and the other for Canadian Airlines. This policy has, for example, reserved all Pacific routes for Canadian Airlines to the exclusion of Air Canada, Wardair and any other Canadian carrier. The new policy has already allowed the two major airlines to swap unused route rights and potential route rights (subject to the conclusion of bilateral agreements). With this swap, Air Canada gained the rights to fly to Korea, Malaysia, Burma, and the Philippines, subject to the appropriate bilateral being in place. As well, smaller Canadian airlines have been granted permission to apply for unused routes, or to fly in competition with the major carriers. The Government has stated that it will attempt to renegotiate bilateral agreements to accommodate the smaller airlines. The abandonment of the spheres of influence policy should allow for the quick expansion of Canada's Pacific route network, since Air Canada will likely begin Pacific services once the appropriate bilateral agreements are in place. Vancouver is in a good position to achieve short term traffic increases because of this policy change. Long term growth, however, will depend on the ability of Vancouver to compete with Toronto and U.S. airports for the Pacific traffic.

In summary, domestic traffic growth at VIA is largely limited by the size of the B.C. market. Transborder traffic growth will be strong, only if Canada negotiates a liberal bilateral with the United States, allowing airlines to connect Vancouver with major U.S. markets at prices competitive with U.S. domestic prices. New policy changes should result in short term increases in overseas international traffic at VIA, but long term growth will depend on the ability of Vancouver to compete with other North American cities for Pacific business.

Factors Influencing Airport Choice

To be competitive, Vancouver must understand the factors which lead air carriers and their customers to choose one airport over another. An airport must be viewed not as an end, but as one piece of a larger logistical system. This has important implications for how VIA can be marketed to the rest of the world.

Markets Served by VIA

Transcontinental. VIA serves as the western end of transcontinental runs to Toronto and Montreal. There is no real competition by other airports (e.g., Abbotsford, Seattle, Bellingham) for this traffic. British Columbia. VIA currently serves as the focal point of feeder routes from communities such as Penticton. Residents of these communities fly to VIA to connect to transcontinental, international, etc. flights. Calgary is a viable alternative to VIA for many of these communities.

Western Arctic. Edmonton is the major gateway to the western arctic. VIA is connected to Whitehorse, and thus indirectly to much of the rest of the region. As most arctic services, including those through Edmonton, currently require two flying days to reach eastern Canada, Vancouver has an advantage as an overnight stopover.

California and the Western U.S. VIA is linked to Los Angeles, San Francisco, and San Jose in California. Seattle, Denver and Salt Lake are also served, the latter two via either Seattle or Spokane. Other than a route to Chicago, VIA has no "deep penetration" elsewhere in the U.S. Dallas is a frequently cited omission. Because of this lack of direct service, Seattle is able to siphon off much traffic from VIA. It also makes VIA somewhat unattractive as a place to set up business.

Europe. Vancouver has direct service to many European cities, such as Amsterdam and London, and indirect service (through London or Toronto or Amsterdam) to most cities in Europe. Toronto, New York and Montreal are in much stronger positions to retain European traffic.

Pacific Rim. The competition for the growing Pacific Rim traffic is strong. Both Canadian and U.S. airports fight for dominance in this market. To the east, VIA competes with Toronto and New York, and to the south, Seattle, Los Angeles, and San Francisco and, to a lesser extent, Portland. The more "liberal" bilateral air transport agreements signed over the past seven years between the U.S. and many Asian countries has resulted in easier access for these carriers to the U.S. (and for U.S. carriers to Asia) while Vancouver's access to the Pacific has been relatively stifled. This is giving the U.S. gateways a growing advantage relative to VIA for the Pacific Rim bonanza. Further, once U.S. and Asia carriers become entrenched in their new routes, it will be increasingly difficult to dislodge the established traffic patterns. While the Pacific Rim will continue to grow, there appears to be a one-time strategic adjustment underway as carriers exploit their new found freedoms. VIA must act quickly if it is to participate in the new strategic shifts.

New York already attracts much Asian traffic. Cathay Pacific, when it entered the Vancouver-Hong Kong market, was able to build traffic out of Vancouver by diverting eastern Canadian traffic away from the New York gateway to Vancouver. Similar strategic opportunities undoubtedly exist.

Toronto must be viewed as a potential competition for Pacific Rim gateway status, should it receive nonstop service to the Orient. Vancouver also competes for western Canadian traffic with U.S. gateways, such as Seattle, Los Angeles and San Francisco.

South America. There are strong and growing links based on economic and cultural links between South America and both Asia and Europe. VIA is linked by way of Toronto to several South American countries. VIA currently serves as a channel point for some Asia-South America traffic (as well as Asia-Europe). Should Toronto develop stronger links to the Orient via the North Pacific, Vancouver will be at a disadvantage to capture this Europe and South America destined traffic.

Choice of Airport

Why does an airline choose to patronize an airport? Why should it come to Vancouver rather than Seattle, San Francisco, Los Angeles, Toronto or New York? The choice is based on many different factors, some of which have little to do with the airport itself. Regulatory environment, airport facilities, costs, off-airport environment (such as tourist facilities, port links, etc.), and passenger amenities all influence the decision as to which airports are most attractive. Hence, Vancouver International Airport must be viewed as a "complete package", encompassing not only the airport, but Greater Vancouver and the Province as well.

An airline also chooses an airport based on the needs of its users. The carriers' passengers must have a reason to attend or pass through Vancouver. Cargo handling and transfer to end-users must have value. Thus, the airport is viewed as one element of a complete logistical system.

Appendix 3-34 contains an analysis of the characteristics that comprise the logistical system and thereby influence the choice of airport. The analysis is grouped around the categories of

a) Regulatory constraints
    - bi-lateral air treaties
    - customs
    - taxation policies

b) Airport facilities
    - passenger terminal building
    - gate space and facilities
    - duty free shopping
    - airport office centres
    - transfer times
    - traffic congestion
    - ground traffic
    - cargo handling equipment
    - maintenance
    - container availability
    - ground handling service

c) Cost of doing business
    - fuel costs
    - crew layover costs
    - maintenance costs

- land and ground fees
- customs fees and taxes

d) Off-Airport factors

- attractiveness of community
- hotels
- meals
- cultural diversity
- local tourist attractionns
- links to out-of-town attractions
- shopping
- city amenities

While it is beyond the scope of this report to analyse in detail the adequacy of each of these elements, it is important to recognize their relevance and evaluate Vancouver's performance. While clearly Vancouver has some distinct advantages, there are also some areas where concentrated effort must be expended to give potential travellers and shippers the clear signal tht VIA should be their airport.

Nor is Vancouver alone in re-evalutating its facilities and marketing its services. Appendix 3-25 is a case study of nine North American airports: New York, Seattle-Tacoma, Toronto, Portland, San Francisco, Los Angeles, Dallas-Ft.Worth, Miami and Bellingham. These airports are attempting to establish their own distinctive market niche and position themselves to take advantage of opportunities being created by the changing air transport environment. A review of their marketing programs is instructive.

The Actions VIA Must Take

Everything that VIA can do can also be done by other airports. While strategically located, VIA has few attributes which give it a unique position in the minds of shippers or travellers. Thus, VIA must compete.

To retain its existing stature and to exploit new opportunities, VIA must first and foremost adopt an entrepreneurial, market and customer oriented attitude. This attitude will see the airport as part of a broader set of freight and passenger logistical systems. It will recognize that competing systems exist and will continue to arise. The new attitude will understand that it is the needs of the ultimate customers which must be met, and that customers have increasing numbers of choices before them and are increasingly sophisticated in their analysis of choices. Customers' needs will change, so an active and responsive system is needed.

Once having decided upon a entrepreneurial and customer oriented approach, VIA will need to increase the importance of its marketing function. The marketing team must have an attitude of cooperating with customers and endeavoring to find out what their needs are. The marketing group will need to be entrepreneurial. It must not be constrained by a bureaucratic structure and corporate philosophy. It will need to be responsive, with the ability to make quick decisions and put them immediately into action. The marketing team must be willing to visit with, and able to talk the language of, the airport's immediate as well as ultimate users. Since many of the ultimate users are widely dispersed, the airport team may need to serve in the role of initiator and organizer. Just as the CP railway irrigated the desert of Alberta in order to create rail traffic, the VIA team may need to think "outside the lines" in order to create and nurture new markets.

Since the economic health of the regional economy is so linked to the health of the airport and its users, airport managers must view the airport as a powerful tool for regional economic development, not just as an independent cost centre. Opportunities which may have great impact on regional development, but only minor impact on airport profitability, must not be allowed to slip away. The airport can no longer be viewed solely as a transportation facility. It is an essential element in a regional economy and easily integrated into a logistical system extending beyond the airport into the British Columbia community.

Conclusions

1. Air transport is in the throes of major strategic shifts;

2. These shifts threaten Vancouver's traffic base, especially if a business-as-usual approach is adopted;

3. These shifts also create opportunities which VIA could exploit to its advantage;

4. Pacific Rim, Pacific-Europe and Pacific-South America traffic is likely to experience continued strong growth;

5. Air freight is likely to experience continued strong growth;

6. VIA is not likely to serve as a major hub in North American traffic, nor as a hub for overnight courier operations. It can, however, act as a significant "domestic" hub for Canadian traffic.

7. Vancouver International Airport is falling behind the west coast U.S. airports and Toronto in terms of growth in international passenger traffic. This trend will only get worse as foreign countries negotiate access to Toronto for their carriers and as U.S. and foreign carriers develop greater access south of the Canadian border.

8. VIA can be a major gateway for Pacific Rim traffic, whether that traffic is destined for Canada or connecting to Europe, South America or the U.S. In the latter case, VIA would serve an in-transit role.

9. VIA can act as an international cargo center, especially with respect to growing Pacific Rim trade, whether destined for North America, South America or Europe.

10. The integration of the airport with a free trade zone, strategically located on the major air route from Asia to the rest of the world, would enhance Vancouver's role in international cargo.

11. VIA can act as a gateway to many attractive tourist destinations, such as the Rockies, Alaska, the Yukon and Western Arctic as well as more local destinations such as Whistler and other B.C. resorts.

12. Participation in the opportunities created by the new forces in the market mandates a new, active, entrepreneurial approach to marketing, even if the goal is simply to maintain current traffic volumes.

13. To increase its market share and effectively compete with the marketing programs of its westcoast competitors, an agressive marketing program is required which will not only analyze the opportunities created by the changing air transport environment and create a distinctive market niche, but also be able to respond quickly and creatively to market opportunities.

14. VIA must compete. To do so it must develope an entrepreneurial, market- and customer-oriented approach. This means an ability to make quick decisions and implement them immediately.

15. To complement its marketing programs, VIA must develop a strong and independent voice to influence government policy in negotiation of bilateral agreements.

16. Time is of the essence. The air transportation industry is in flux. Once new logistical systems are put in place and routes established it will be much more difficult for VIA to establish itself as a world class airport. The time for decisive action is now.

CHAPTER 4. THE CHALLENGE PART TWO: AIRPORTS AND ECONOMIC DEVELOPMENT

In 1986, Vancouver International Airport (VIA) handled 8.5 million passengers and over 100,000 tons of cargo making it the second busiest airport in Canada.

VIA is an important component of the British Columbia's transportation infrastructure and as such, it has an important impact on the B.C. economy. A review of the basic facts illustrate the point:

.	Employment (person years)	
	- Direct	12,615
	- Indirect	7,076
	- Induced	8,996
		28,687
.	Gross Revenue	$2.4 billion
.	Gross Domestic Product	$1.4 billion
.	Capital Investment	
	- Historic	$310 million
	- Current Replacement	$1,526 million

The impacts VIA has in the B.C. economy are significant (3.1% of British Columbia's G.D.P.). However, the potential is there for it to become an even greater economic development tool. To identify and review this potential and assess what organizational changes are required for VIA to meet its economic development potential, the Airport Planning Group asked Price Waterhouse to undertake a study of the potential economic impacts. The analysis proceeds in four distinct sections as follows:

- Potential Economic Effects of VIA's initiatives: a description of the incremental effects of VIA's initiatives using US case studies to illustrate the potential for change.

- Linkages of VIA activities with industry and commerce in BC: a review of the importance of VIA to other sectors of the economy.

- Foreign Trade Zones and Special Enterprise Zones: a description of the concepts and an analysis of the potential costs and benefits from the development of these zones.

- Conclusions that develop criteria for VIA's organization as an economic generator.

Economic benefits of airports

In Canada, airports have traditionally been considered as part of a city's necessary infrastructure. In this approach, airports are viewed as being similar to roads, utilities, and other transportation facilities; an overhead that is an essential part of the total costs of having an urban community. Apart from merely filling the community's need for access, airports have been viewed as yielding no other economic value. They are often considered a large, but necessary, drain on urban resources, offering little scope for regional development. From this perspective, the problem of airport planning becomes one of minimizing total direct and indirect (e.g. aircraft noise, disruption of land usage) costs of the facility.

A more sophisticated approach to airport and municipal planning, and one that is still in its infancy in Canada, recognizes that airports can play a positive and significant role in the economic development of the community. An airport if it is considered as a local industry which can, if fully developed, be a significant generator of local income and employment, and a key component of the local economic base.

These two approaches are reflected in current thinking about airport management. Until recently, Transport Canada has operated its airports as an essential utility or public service, with a strong emphasis on operations issues and cost reduction. Given Transport Canada's mandate, this is perhaps understandable. The alternate approach, while not neglecting operating and cost factors, emphasizes the revenue and employment potential of an airport, and seeks to maximize these prospects to the ultimate benefit of the community. This approach requires a more regionally sensitive and broader based definition of the role of airports in a community and is usually defined as the "local authority" approach.

The prime reason for adopting the local authority approach is the potential incremental economic benefits resulting from local operation. Certainly, Transport Canada operates the airports safely and effectively today. The issues to address are, therefore:

- what initiatives could a local authority take more effectively than the federal government?;
- what would the incremental benefits of these initiatives likely be?; and
- is there evidence from other airports' experience that would point to economic success from local initiatives?

Table 1 summarizes the expected initiatives of a local authority, the primary impacts, and some economic and social effects.

Table 1: Airport Initiatives, Impacts and Effects

INITIATIVES	PRIMARY IMPACT	ECONOMIC AND SOCIAL EFFECTS
. More aggressive marketing of air services, facilities.	. Increased passenger traffic . New direct services. . Increased cargo volumes. . Increased tourism.	. Increased employment. . Increased revenues. . Congestion
. More aggressive marketing of industrial development	. Attraction of new services/ industries to the region.	. Increased employment. . Increased spending. . Congestion
. More concessions, enhanced concessions	. Increased concession revenues.	. Employment . Foreign exchange
. Local financial control	. Retention of surpluses in B.C. . Lower costs to users. . Freedom to raise money for capital projects.	. Enhanced local economic strength.

Each of these initiatives is discussed briefly below. Because we have few examples of large international airports in Canada operated by a local authority, some examples from the U.S. experience will be examined to illustrate the potential for success and the potential economic impacts.

Marketing of air services and facilities

This function includes:

- constant review of origin-destination data to identify new potentials for passenger or cargo services;
- modification of facilities to meet special requirements;
- active involvement in promoting new services to carriers and to governments involved in bilaterals; and
- joint tourism promotion activities.

Case Study - Nashville and American Airlines

A study of Nashville and American Airlines illustrates how a community can market its airport facilities to air carriers. As a result of greatly increased activity by American Airlines at Nashville, the city has been able to benefit in numerous ways. The dramatic increase in the scale of American's operations at Nashville has had the following benefits:

- improved links and better accessibility;
- greater demand for local goods and services;
- increased airport activity, resulting in increased revenues for landing charges;
- additional local employment by the airline;
- a higher profile for the city's aviation sector nationwide;
- the likelihood of increased air cargo volumes, and new services providing an impetus for local manufacturers and shippers;
- the "critical mass" of operations needed to justify certain cost saving capital investments, such as a fuel hydrant system, used by all of the airport's major carriers, and an extra runway. These items increase the airport's attractions to even more carriers;
- increased revenues to airport concessions, not only from local residents or visitors, but also from persons of other regions in transit through the airport; and
- the likely retention of surplus airport profits within the Nashville region.

Due to its location in the shadows of Atlanta, Dallas, and Chicago, Nashville was not expected to be a major beneficiary of airline deregulation in the United States. Its outlook was further weakened by the city's small size, lack of immigration and customs clearance facilities, and a relatively static regional economy. Despite these limitations, the city's airport authority believed that airline deregulation, and the industry-wide shift to hub and spoke systems, offered even smaller centres major new opportunities to become airline hubs.

The airport authority approached several airlines which, it was felt, might benefit from establishing a hub at Nashville. In early 1985, American Airlines responded with a list of requirements for a Nashville hub. The authority determined that it was able to meet the requirements, but considerable effort would be required. Although a new terminal was then under construction, the airport authority halted all work, and ordered a major redesign and enlargement of the new facility to accommodate American. One revenue bond had already been sold to finance the original expansion; however, the authority floated a second issue to cover the greatly increased cost of the terminal. Although a new runway had been planned for the more distant future, Nashville's airport authority agreed to expedite construction in support of the American hub. Funds for the new runway were provided by the second revenue bond. The terminal, which began operations in September 1987, is owned by the airport authority but leased to the airlines. American has exclusive use of Concourse C.

As a result of this recent expansion, the size of the facility has almost quadrupled. Twenty-four new gates were installed. Of the 25 gates ultimately to be used by American, 15 are now in use; the other ten gates will be activated as hub frequencies are increased. Nashville is now American's fourth hub (after Dallas, Chicago, and San Juan, Puerto Rico, with Raleigh-Durham to follow shortly), and occupies a key position in the airline's strategy to develop traffic from the U.S. southeast to Midwest and western points.

The fact that Nashville's airport was operated by a commercially-oriented authority rather than a political body was viewed as a favourable factor in attracting new airlines. The authority's ability to halt construction of the new facility, and substantially redesign both the physical plant and the financing package around the needs of an individual customer, were pivotal to the success in encouraging American to locate a hub in Nashville. The authority already charged relatively low landing fees, an additional positive factor.

American Airlines was one of the original airlines to serve Nashville, and had a long interest in the community. The airline has leased land from the airport authority to establish a fuel tank farm and hydrant system at its facility. This will serve other airlines at the airport.

The Nashville authority's land review committee is presently drafting a long term plan for aviation and non-aviation use of airport land. The airport has a large quantity of unused land.

The airport presently contributes one-half billion dollars to the Nashville economy; this is expected to double by the year 2000. Airport authority staff did not have the estimates of the incremental contribution to the community of American's expanded operation.

Case Study - International Services to Portland

The City of Portland, Oregon, has followed an active and successful campaign for international services. While this project is on a smaller scale than Nashville's, it will provide a similar set of benefits. It will, moreover, establish Portland as a gateway to the United States for trans-Pacific services, and will therefore stimulate interactions between the city and the Pacific Rim. There are new import and export opportunities for local businesses.

Portland's initiative will also benefit the local tourist industry.

The growth in U.S. Far East traffic has led to a major expansion of trans-Pacific services. Several airports in the United States have actively sought direct routes to the Orient, including Portland. A comprehensive study of traffic patterns financed by the airport's marketing department indicated that the city could support direct services to Tokyo, and that Delta Airlines was the company best qualified to develop this gateway. As a result of an intensive lobbying battle among carriers and competing gateways, Portland was designated for a trans-Pacific service. Delta, the city's partner in this bid, has since begun an Atlanta-Portland-Tokyo service, its first service to the Orient.

This example is particularly relevant to Vancouver. It indicates how a local authority, acting in unison with a carrier can enhance its role as a gateway to the Orient. Portland is a rival to Vancouver, and the local authority would appear to give it a competitive advantage in capturing traffic from the Lower Mainland. As a result of its acquisition of Western Airlines, Delta now operates a direct Vancouver-Portland link. This link can be exploited to feed Delta's new service, and will siphon off traffic which might otherwise fly direct to the Orient from Vancouver. Delta will have an incentive to skim the established Vancouver-Orient market, particularly if load factors on Delta's Portland-Tokyo flight are initially weak.

Case Study - Seattle

A case study of Seattle illustrates how a local authority can encourage new carrier activity through making specific investments and devising multimodal traffic development strategies. Benefits to the community include additional employment by carriers and agents, additional revenues to the airport and placing the airport in a role as the hub of a transportation system spanning three continents.

Large volumes of exports are shipped from the Orient by a combination of sea and air transport. Items are conveyed to North American west coast gateways by ocean container ships and loaded onto aircraft for transportation onward to Europe, the Caribbean or North America. This concept was pioneered by Air Canada in the 1960's out of Vancouver, and is of paramount importance to Vancouver's air cargo volumes. Other west coast gateways are also active in this market.

Seattle has used Sea/Air as a means to develop better air cargo services to Europe. The Atlantic cargo market is characterized by strong westbound volumes, but weak traffic from North America has made many all-cargo services to Europe uneconomical. The Seattle authority believed that the lack of lift to Europe was limiting local exports, and Sea/Air was sought as a means to top-off the aircraft.

In order to attract additional inbound volumes of containerized cargo from the Far East, the Port of Seattle had previously established the innovative Truck Contract Program. This service, the only one offered by a U.S. port authority, provides expedited trucking service from Seattle to points in the interior of the United States. This service offered the opportunity to assist the airport in developing inbound traffic from Europe.

The port therefore sought and successfully obtained additional Europe-bound Sea/Air to fill the backhaul portions of the new all-cargo flights. The Port of Seattle, which operates both the airport and marine terminals, now cooperates with steamship companies to ensure that Sea/Air cargo is properly stowed on the ship at the port in the Far East, so that it can be unloaded rapidly at the Seattle dock and transferred to the airport. Rapid handling at Seattle is vital to the success of Sea/Air. The authority also purchased a 60,000lb. main deck cargo loader to satisfy the airlines' need for better ground handling equipment. It is rented to any carrier on an hourly basis. Seattle is the only airport in the United States to offer this equipment to its carriers.

Seattle's promotion of Sea/Air has been extremely successful, Cargolux now offers three B747F flights from Seattle to Luxembourg, and will be adding a fourth shortly. Martinair has one 747F flight weekly to Europe, and SAS, Pan Am, Finnair and British Airways offer wide body passenger flights. Seattle's Sea/Air traffic is growing at well over 10% yearly and now comprises the bulk of Europe-bound cargo.

Seattle's growing Sea/Air traffic is of vital concern to the future of Vancouver. At present, much of Vancouver's Sea/Air is trucked into Canada from Puget Sound ports. It may be extremely vulnerable to capture by airlines flying from Seattle. Vancouver presently lacks all-cargo service to Europe. It must compete with centres in eastern Canada and throughout the United States for capacity on Toronto-Europe freighters. While lower deck space on widebody passenger flights is attractive to shippers, the total capacity is small in comparison to the 747F's serving Seattle. KLM's plan to institute 747 Combi service to Vancouver will help offset Seattle's growing advantages. Nevertheless, SeaTac may ultimately threaten Sea/Air now moving by ship into Vancouver, to the detriment of both Vancouver's marine and aviation sectors. Sea/Air has vital implications for the marine, air and, likely, truck and rail operations at the Port of Vancouver, has given it a significant competitive advantage which requires rapid counteraction by the Lower Mainland.

Marketing of industrial development

This function includes:

- identification of land surplus to aviation needs through a frequently updated master plan;
- development of a commercial plan to optimize the use of airport lands not needed for aviation purposes;
- development of strategies, marketing packages and promotional materials to attract tenants;
- active campaigns to attract new tenants, particularly those from outside Canada, with the objective of creating new jobs; and
- providing the airport local authority with the authorities and reserve funds to do deals to attract investors.

Case Study - Tucson Manufacturing Plan

The Tucson, Arizona Airport Authority has a classic success story. City business people became aware that Gates Lear jet (manufacturer of business jets and other aeronautical equipment) was seeking a new plant location somewhere in the western U.S. The Airport manager and a local team travelled to Gates and "sold" them a package to relocate on the airport at Tucson. The gain to the community was 400 new jobs.

Case Study - Johnson County Industrial Park, Kansas City

This case illustrates the role of a local authority in developing aviation - and non-aviation related industries at an airport. The capital investments made by airport managers have promoted efficiency and employment at the airport, and a significant growth in local income.

The Johnson County airport is located 25 miles southwest of Kansas City, Kansas. This airport was formerly the Olathe Naval Air Station, used as a training field for the Naval Reserve. The base was deactivated in 1970, causing the loss of 250 civilian jobs and a $5.3 million local payroll, In order to fill the gap left by the loss of the air station, Johnson County acquired the field and formulated plans to develop it as a general aviation field and industrial park.

The county acquired additional land, and developed an airport master plan calling for $11.5 million (1975 prices) investments over a twenty year horizon. Older buildings on the site were razed and the airport built a large hangar and office facility. The airfield was improved, with runway and taxiway rehabilitation and the addition of vastly improved navigation aids. The control tower was reactivated with civilian controllers, allowing a major increase in general aviation operations at the field.

To facilitate development of the industrial park, the county extensively upgraded airport roads and installed utilities. A four lane link with the airport to major highways is now being designed.

By 1985, the airport had lured 45 manufacturing and business companies to the field; one occupying the largest office building in Kansas. The value of new construction now exceeds $125 million. The 2,500 jobs created by the airport industrial site generate an annual payroll to the community that exceeds $40 million. The community has allocated 70 acres of land for development of a foreign trade zone.

More concessions, enhanced concessions

Optimization of concessions requires:

- risk sharing by the airport;
- contracts with flexibility to require updating of "tired" facilities or product lines;
- aggressive monitoring of concessions; and
- concession agreements tailored to each concession type.

Airport Retailing Trends

Investigation of retailing illustrates how more sophisticated approaches to the management of airport concessionaires can yield significant community benefits. Additional revenues are retained by the community. The revenues resulting from the public's voluntary purchase of goods and services at airports provides local airport management with an alternative to higher user fees and, indirectly, increased airline ticket prices.

Progressive airports are placing greater emphasis on airport concessions. While many airports have regarded concessions as but a source of incidental revenue, which provide a minimal level of service to a captive market, there is a shift, particularly in the United States, to a more professional management of concessionaires. They are increasingly viewed as a significant source of airport income, and a key component of a single cohesive transportation and customer service product offered by the airport, the airlines and the concessionaires.

Washington DC has been a leader in improving its management of airport concessions. A detailed study was made of customer demographics, buying habits and income levels. Airport concessionaires were also studied. A clear lack of "fit" was found; concessions generally sold low quality merchandise with high markups. They did not reflect the needs of the customers or recent shifts in the character of the travelling public; a large number of discretionary travellers, a growing proportion of women, and relative affluence. Airport concessions did not reflect the North American trend away from mass merchandising and towards smaller specialty retailers. The airport management consequently revised its management of concessionaires. Through visits to other airports and to local shopping malls, entrepreneurs were identified who would be particularly adept at developing an aviation retailing business. They were encouraged to bid for space. Procedures for requesting bids were revised, and qualitative retailing factors were added to proposal evaluation criteria. Charges were revised, generally to encourage greater sales. Concessionaires were obligated to retain professional space designers to plan store interiors.

At the National and Dulles airports in Washington, these initiatives are now reflected in a change in the mix of concessionaires. There has been a tendency to replace small, spartan fast-service outlets with more elegant and upscale retailers. For example, a toy shop at Dulles, paying the airport 40% of gross sales of $119,000 was replaced by a specialty book store which paid between 8% and 16% on gross sales of $800,000. Revenues at the airport for this small space alone increased by over $16,000 or 34%.

Other airports have taken similar steps. Some encourage concessionaires to put local flavour into their facilities or merchandise; others continuously monitor concessionaires in terms of subjective and objective standards which include merchandise stocking, appropriateness of promotions, and cleanliness. Singapore monitors airport retail prices to ensure that they are in line with or competitive to prices in downtown stores or at other airports. Boston uses a two-tiered rent structure in which the concessionaire pays the airport a lower percentage of sales on low margin items. Miami is making greater use of management contracts rather than standard concessionaire agreements. This affords the airport management better control over quality and service. The airport can order that facilities be altered or renovated during the term of the agreement in response to current needs or market opportunities. While these agreements require more involvement by airport management, revenues to the airport have doubled in some cases when a concessionaire became a management contractor. Short-term leases are also employed, although these sometimes require that the airport assume the capital costs of shop construction.

The Amsterdam Schiphol airport, operated by an authority, is famed for its extensive collection of duty-free shops. Although the shops are operated by individual concerns, the concession agreement specifies such a coordinated marketing approach which includes standard uniforms for shop attendants. The airport offers a money-back guarantee if a lower price is found elsewhere in the world. Annual turnover was $123 million U.S. in 1985.

This complex has been recognized as a factor in attracting passengers, and has, along with a well designed single terminal, been responsible for making Amsterdam a preferred airport for connections. Although Amsterdam is not a primary European destination, it has become an important hub, and a favoured transfer point for destinations in Europe and Asia. KLM, the Dutch flag carrier, is extremely effective at developing the so-called "sixth-freedom" traffic; passengers travelling from say Vancouver to third countries via a connection at Amsterdam. KLM's principal competitive advantage is the Schiphol Airport, and the attractive duty-free shopping opportunities it provides to transit passengers. As a result of its development of connection traffic, KLM is a far larger carrier than it would otherwise be and Amsterdam is a much busier airport. Amsterdam is the premier example of an effective airline-retail, and airport facility triad.

The Amsterdam lesson is particularly salient for Vancouver. As Canada's gateway to the Pacific, its airline services, both international and domestic, are highly dependent on passengers from interior points connecting to overseas flights. The airport also was used in the past by CP Air (now absorbed into Canadian Airlines International) to service Oceana-Europe and Latin America-Orient bridge traffic. But the airport's role as a connecting point is threatened. Many passengers from Eastern Canada now connect at U.S. gateways for flights to Asia, and this proportion will likely grow because of the profusion of new U.S. - Orient flights and the development of gateways in the U.S. hinterland (Detroit, Chicago, New York, Dallas). Japan Airlines' decision to reduce its Winter 87/88 Vancouver-Tokyo frequencies will only exacerbate the loss of Pacific connecting traffic to other gateways. An effective means to counter the loss of Canada's Orient-bound passengers to U.S. airports is critical to the future of the Vancouver airport, and Amsterdam's positioning of itself as a connecting airport par excellence may suggest appropriate strategies.

Local financial control

Local financial control, which exists at all U.S. sites and most other sites elsewhere in the world includes:

- local retention of surpluses;
- local fee setting - both level and structure of fees;
- local responsibility for losses;
- local development of debt issues; and
- local development of capital projects.

The results of local financial control could be retained earnings for investment in the region, but a more likely outcome is fees and charges structured to promote the growth of types of traffic beneficial to Vancouver - Sea/Air for example.

Table 2 summarizes the secondary benefits for these selected cases. The economic and social effects of these secondary effects are clear: greater local employment, greater local income and the noise and congestion effects of significantly greater air and ground traffic. Evidence from other airports around the world indicates that a business- focussed, locally oriented airport management can provide significant incremental benefits to the local economy.

Table 2: Summary of Cases, Initiatives and Secondary Benefits

Case	Initiative	Secondary Benefits
Nashville/ American AL	Airport Marketing	Addition of new routes Increased passenger traffic Increased cargo traffic Increased employment Increased local purchases Supplier development Increased concession fees Increased concession sales Capital investments for efficiency Land development Increased user charges revenues
Portland/ Delta AL	Airport Marketing	Addition of new routes Increased passenger traffic Increased cargo traffic Increased local purchases Supplier development Increased concession fees Increased concession sales Tourism Stronger international presence Increased user charges revenues
Johnson County	Land Development Capital Investment	Increased local purchases Supplier development Increased user charge revenues Increased employment Increased land rents

Case	Initiative	Secondary Benefits
Various	Concessions	Addition of new routes Increased passenger traffic Increased cargo traffic Increased employment Increased local purchases Supplier development Increased concession fees Increased concession sales Capital investments for efficiency Increased user charge revenues Airport became hub
Seattle Sea/Air	Intermodal Capital Investment	Addition of new routes Increased cargo traffic Increased employment Increased local purchases Supplier development Increased user charge revenues City became intermodal hub Stronger international presence
Montreal Transport	Airport Marketing Canada	Addition of new routes Increased passenger traffic Increased cargo traffic Increased local purchases Supplier development Increased concession fees Increased concession sales Tourism Stronger international presence Increased user charge revenues

Linkages of Vancouver International Airport (VIA) with B.C. industries

VIA plays an important role in the development of local economic activity. The purpose of this section is to identify the linkages of airport operations with airport related sectors and other industries in B.C.

Airport related sectors

Airport related operations include businesses and organizations whose primary line of operation is linked to the Airport. These are typically based from the Airport site and they include the following:

- Airline carriers like Canadian International Airlines and Air Canada that offer scheduled air service within British Columbia and between the Lower Mainland and other destinations.

- General aviation operations including rotary and fixed-wing charter air operators, flying clubs and other aviation related organizations or training centres.

- Cargo operations and air support service companies including:

  - customs brokers, couriers and freight forwarders
  - flight catering services
  - fuelling services
  - sales, rentals or aircraft leasing businesses
  - parts and maintenance services (including Canadian Airline maintenance facilities)
  - general services (i.e. fixed base operators).

- Businesses and organizations associated with Airport operations and administration including:

  - customs and immigration (Canadians for entry into Canada; - United States for pre-clearance and entry into the United States)
  - airport security (RCMP)
  - atmospheric environmental information
  - air postal services

Linkages with other B.C. industries

The Vancouver Lower Mainland is the centre of B.C.'s population centre. Accordingly, virtually all aspects of the B.C. economy depend on transportation and Airport services between the Lower Mainland, the rest of B.C., and other destinations including Eastern Canada, the U.S. and abroad:

- VIA provides a market area for a span of service businesses which cater to the passenger terminal traffic. Examples of such businesses include:
    - retail services based at the Airport, including book stores, hairdressers, florists and duty free shops;
    - ground transportation service businesses including car rental companies, taxi services, and bus service operations;
    - parking service companies at the airport site, service stations and other businesses which serve the car traffic in and out of the terminal.
- VIA is an essential link to the tourist/travel/hotel industry. Businesses that depend on VIA include, travel agencies tour operators, and hotels.
- VIA is a "gateway" and a hub airport for recreational activities in B.C.:
    - tourism/travel/sightseeing;
    - recreational fishing;
    - coastal cruising charters;
    - skiing;
    - white water rafting;
    - golf;
    - hunting;
    - mountaineering; and

  - trail riding.

- VIA is an essential element of doing business in B.C.:

  - The airport gives access to activities in the B.C. Interior, such as mining and exploration, and forestry.
  - It plays a part in the interaction of the emerging B.C. film industry with the U.S. industry.
  - It provides the infrastructure for the growing convention activities, drawing customers from the U.S.
  - It provides easy access to the West for the Federal Government, company head offices, and financial institutions in the East.

- VIA is essential to the provision of postal and courier services both within B.C. and between B.C. and the rest of the world.

- Together with the Port of Vancouver, VIA provides access to the Pacific Rim. The airport serves as a terminal point for the large Asian population. It provides air service to Japan, Australia, Korea and other Pacific Rim countries, thereby helping to promote trade with the entire region.

- VIA is essential to the development of high technology industries in B.C. which often rely on airport services to carry small, valuable products.

- VIA is an important element in the emergence of Vancouver as a financial centre.

- Through intermodal links, VIA is part of the entire distribution network in B.C.:

- VIA has the potential to offer a water/air link between Pacific Rim countries and Europe.
- VIA is an intermodal link with the Cruise ship industry.
- VIA supplements the extensive network of highway and railway links.

Foreign trade zones and special enterprise zones

Objectives and definition

The objective of a Foreign Trade Zone (FTZ) is to encourage the production and processing of goods and services which would otherwise be conducted in another country.

The term FTZ is used extensively in the United States to designate sites associated with a local port or airport authority, in which customs duties are assessed on foreign goods only if they enter the U.S. markets. An estimated sixty percent of the merchandise shipped out of U.S. FTZs remains in the United States.

FTZs in the U.S. are created by the Foreign Trade Zone Act of 1934. Under this Act, an FTZ is defined as a fenced or segregated area with strict monitoring of admission and exit traffic of goods.

The zones in the U.S. are either general purpose or special purpose (i.e. sub-zones). A number of firms may operate in a general purpose zone, while sub-zones are single firm manufacturing sites.

Cities and corporations generally initiate the development of the zones or sub-zones in the U.S. The advantage of operating in a zone is mainly limited to the duty free status. Other industrial incentives like reduced lease rates and property taxes may be provided by the state governments, but these are not just limited to companies operating in FTZs.

By contrast, a Special Enterprise Zone (SEZ) is a term used by the B.C. government to define the structure by which B.C. intends to attract new kinds of industries to the province through the offering of special tax and industrial incentives. SEZs in B.C. are defined under the Special Enterprise Zone and Tax Relief Act enacted in June 1985 by the provincial government. Under this provincial Act, SEZs are not granted the duty free status given FTZs, because customs duties are within federal jurisdiction. Under current legislation, custom duties in Canada may be reimbursed on products exported abroad, but this requires considerable red tape and paper work and is often not done. Reimbursement also involves customs clearance which is often a lengthy process.

Methods of Operation

The method of operation of an FTZ depends on the circumstances of each situation. In total, there are over 100 FTZs in the United States, all of which differ from one another. Some are operated by the local port authority, others by the airport management, while others operate totally independently from the local port or airport. Generally, the characteristics of FTZs in the U.S. are as follows:

- Land at the designated site is made available for development of structures by tenants interested in producing/assembling or repackaging goods for export abroad.

- An FTZ operator, which is typically the Local Authority when the FTZ is based at the airport, monitors the goods entering and exiting the zone, the collection of rents and leases, and the marketing of the zone.

- There may be building facilities already vacant to accommodate potential tenants. Although some FTZs in the U.S. have built facilities on spec, this may be risky as manufacturing companies who are interested in locating in the FTZ are likely to prefer to build their own facilities rather than locate in a multi-tenant building. The type of activities to be undertaken in the FTZ may also affect the building requirements of a potential tenant. This is demonstrated in a case study of the San Jose FTZ. At this FTZ, a multi-tenant building remained virtually empty because its low ceiling and insufficient amount of loading/unloading docks made it unsuitable for the warehousing business activities intended to be carried out at the site.

There are a number of FTZs associated with airports throughout Western Europe, including the Shannon Airport Trade Zone in Ireland. The methods of operation of these zones are not significantly different to those in the United States. The proposed expansion of the Bellingham airport is designed to include a FTZ obviously to enable it to reship goods into Canada.

Elements of cost to develop an FTZ

The only significant cost involved in developing an FTZ at the Vancouver International Airport would be the land cost. The amount of land designated as FTZs at major U.S. airports varies considerably. The Bellingham Airport has designated 150 acres for its FTZ.

The administration costs associated with an FTZ at VIA would probably involve up to three full-time people and some limited marketing and administration expenses, at least until the FTZ is fully operating.

As was discussed earlier, VIA should not build facilities on spec at the FTZ site. This should be left to the potential tenants. Alternatively, the possibility of using an existing warehouse as a multi-tenant facility, could be investigated.

Significance of benefits

The economic impacts generated by an FTZ will depend on the amount of business that can be generated on the site. For example, in the United States, some FTZ have created as little as 5 jobs; whereas others, like the San Jose FTZ, have created over 1,000 jobs (an automobile assembly plant, two light manufacturing plants and one medium size warehouse). In any event, the development of an FTZ at VIA would take time. Whatever the eventual job creation achieved, there could be some element of jobs shifting from the local community to the FTZ.

CONCLUSIONS

1. VIA plays an important role in the development of local economic activity, both for airport related operations and as a vital link with other sectors of the B.C. economy, notably as a "gateway" for tourism and providing easy access for people and goods moving into or out of the province.

2. The airport plays an important role in the distribution network of the province through intermodal links with sea and land transport.

3. While one cannot assume that economic development opportunities seized in one jurisdiction will apply in another, there is nothing that would suggest the initiatives or opportunities developed in the case studies and elsewhere

are not also possible in Vancouver. On the contrary, we are satisfied that many significant opportunities do exist.

4. There is significant potential for VIA to enhance its position as an economic generator, whether it be through increased concession revenues, industrial development, fee structures to promote traffic beneficial to economic development, or development of a Foreign Trade Zone on site.

5. To attain its potential VIA will have to be operated and managed as an economic development tool and not merely a component, albeit an important one, of the region's transportation infrastructure. While the specific initiatives can be determined later, there is a need for a fundamental re-orientation of management attitude and mandates to capture the full economic development potential of the airport.

CHAPTER 5

RESPONDING TO THE CHALLENGE: MANAGEMENT OPTIONS

The purpose of this chapter is to identify, describe and evaluate the structural options available for management of the Vancouver International Airport.

IDENTIFICATION OF OPTIONS

A substantial number of studies have been undertaken to examine the management options available for Canadian airports. The federal Ministry of Transport, the Government of British Columbia and various consultants and other authorities have undertaken case studies and set out the optimal management systems. Appendix 5-1 is a compendium of the research undertaken with a summary of the options and conclusions of each study. To update and further analyze the issue, Price Waterhouse Management Consulting were retained by the Airport Planning Group.

The previous studies, including work done for both the federal and provincial governments, and the work undertaken by Price Waterhouse has identified seven organization structures which, in addition to the status quo, could be used to manage the Vancouver Airport System. These are:

- Modified Transport Canada
- Federal Crown Corporation
- Federal Airport Commission
- Provincial Crown Corporation
- Regional/Municipal body
- Local Airport Authority
- Private sector ownership

A brief description of each option is presented below.

Modified Transport Canada

Under this management structure, VIA could remain under the control of Transport Canada, but the Airport's managers would be given a higher level of authority and a greater commercial mandate:

- The Airport's managers would continue to be responsible for the day-to-day financial management, but they would be given maximum level of authority permitted under the Financial Administration Act and Treasury Board policies.

- In order to meet the objective of greater commercial orientation, a marketing group would be established at VIA.

- In order to gain local input on issues of economic impact, local advisory councils would be established to advise and make recommendations regarding the operation and future development of the Airport.

- The organization of VIA would continue to be subject to the Financial Administration Act, the Public Service Employment Act, the Public Service Staff Relations Act and the Supply and Services Act.

Federal Crown Corporation

With a Federal Crown Corporation, the federal government would retain control, but a separate corporate entity, created by legislation, would be established to operate VIA. Under this option, VIA would be tied to the Financial Administration Act as is the case with all other Federal Crown Corporations. As such, VIA would be required to obtain approval for all capital budgets, operating budgets, and business plans. Although the federal government would have overall responsibility for VIA, this structure would give a more commercial direction to VIA's management. Depending on its legislated structure, the organization could provide for local participation, perhaps through locally as well as federally appointed boards of directors with executive authority.

Federal Airport Commission

Management of VIA by a Federal Airport Commission would mean federal government ownership and ultimate control, but management decisions would be made locally, as is currently the case with, for example, the Fraser River Harbour Commission. Similar to a Federal Crown Corporation, a Commission would be enacted by federal legislation and controlled by a federally appointed Board. Under this option, the authority would not be tied to the Financial Administration Act but would be required to obtain approval of its fee structure and present its capital and operational plans. It would be expected to table an annual report with audited financial statements.

The characteristics of a Federal Commission would be as follows:

- Commissioners would be appointed by the federal government, with the minority of members being nominated by local interests.

- The Commission would have a legislated mandate to fulfill.

- While subject to some degree of government constraint, especially in the financial area, the Commission would have broad authority to plan the development and operation of the airport.

Provincial Crown Corporation

Under this option, the federal government would transfer the ownership and control of VIA to a Provincial Crown Corporation established through provincial legislation. As with most provincial crown corporations, a provincially-appointed board of directors would likely have the executive authority for VIA, and would operate fairly independently from the government. The mandate would be commercial in nature with the ability to operate in a financially self-sustaining manner, possibly funding capital expansion by issuing high grade bonds in the major money markets.

Regional/Municipal Commission

Under this option, the management of VIA would be transferred to the Greater Vancouver Regional District or a group of municipalities specially formed to operate the VIA. VIA could also be transferred to a single municipality, but this is unlikely to be acceptable because VIA impacts on all surrounding Lower Mainland communities and not just Vancouver or Richmond. The municipal authority would provide a mandate, some policy directions and a financial framework for operating the Airport. This structure is similar to the management structure currently in place in municipally run airports like Kelowna and Edmonton.

Local Airport Authority

A Local Airport Authority would be an autonomous local entity set up to own (or lease), operate, and finance the Airport. Under the Local Authority concept, VIA would be operated on a commercial basis, although its mandate would be to break-even rather than to generate profits beyond that required to contribute towards capital expansion.

While there is no single model for reference, the general characteristics can be described as:

- created by one or more governments by enabling legislation;
- an autonomous public corporation governed by an independent board of directors;
- tailored to local needs with strong ties to the local community;
- has the ability to be used as a tool for economic development;
- a corporate structure similar to the private sector;
- operating on a commercial basis, generating revenues from rents, concessions, and fees collected from users of the airport; and
- a mandate to facilitate satisfactory air transportation service to the public, on a financially self-sufficient, break-even basis.

Private Sector Ownership

Under this structural option, the federal government would transfer the control and management to a private sector company. This would constitute a "privatization" as was undertaken, for example, in the United Kingdom.

EVALUATION OF OPTIONS

As part of the evaluation process of the management options, it is useful to identify some of the problems inherent in the current structure of VIA and to develop a set of criteria against which each option can be evaluated.

Development of Criteria

In the last two years, a number of studies have confirmed the inability of the current airport structure to meet competitive forces. At present, most major Canadian airports, including VIA, are operated by Transport Canada. The 1986 Transport Canada Task Force and a recent report by Marian Robson for the Government of B.C. on management options, summarized some of the problems inherent in the existing structure, including:

- too many management levels and difficult communication lines;
- limited or no incentive schemes for management operating staff;
- limited marketing strategies and commercial plans to increase revenues;
- cross-subsidization among airports which may result in higher than necessary charges and limited accountability;
- limited review of capital investment to ensure adequate return;
- slow and unresponsive capital budgeting processes, causing delay in capital programs;
- capital budgeting processes based on engineering rather than financial criteria;
- centralized authorities for project approval, financial administration, contracting, and leasing;
- relatively high overhead costs;
- limited local involvement;
- personnel decisions slow, overly structured and subject to controls of a national governmental system;
- dominated by government funding policies and subject to national spending priorities and a long period of financial restraint and review; and
- contract processes which constrain commercial opportunities and discourage private sector participation.

To assist in the analysis of options six major criteria have been developed, namely:

- Market Assessment
- Economic Development
- Financial Viability
- Relationship with three levels of Government
- Productivity
- Community Support

1. Market Assessment

As discussed in Chapter 3, the environment in which VIA operates is changing:

- Turbo-prop aircraft are replacing jet aircraft on commuter traffic.
- Deregulation in the airline industry has caused a shift towards a hub and spoke network by carriers.
- The newest Boeing aircraft can now fly nonstop for 7,100 nautical miles which allows for several North American-Orient nonstop routes and could result in flights over flying Vancouver. This and other technological developments arc also affecting runway and terminal requirements.
- Trade is increasing in the Pacific Rim.
- SEA-TAC has been developing as a major U.S. and Pacific hub.
- Competing U.S. airports are becoming more market-oriented.

The environment facing VIA has therefore become increasingly complex and competitive. In order to maintain its status as a major Canadian and North American airport, VIA's management must be structured so that it can react to these competitive forces and this changing environment.

Specifically, market assessment criteria have been identified as follows:

- _reaction to competitive forces_: ability to respond quickly to the increasingly competitive environment, and logistical system and the needs of current and potential airport users.

- _marketing strategies_: ability to identify and assess market opportunities and to define and implement marketing strategies to meet these opportunities.

- _planning element_: ability to develop a planning function which is emphasized by market demands and not just engineering and technical requirements. Also, to be efficient, the planning function must have authority to implement market-driven corporate strategies (ie. not linked to politics or dependent on bureaucracy) but also make capital investment that will attract business and economic development.

- _revenue generation_: ability to identify and implement ways to increase revenues including concession, revenues, leases and rentals, as well as user fees.

- _level of entrepreneurship_: ability to develop a corporate structure which encourages initiative and rewards risk taking.

- _decision-making process_: ability to move quickly and efficiently to marketing and corporate planning strategies. Decision-making process must be responsive and not dependent on approval from a bureaucratic government department.

2. Economic Development

As described in Chapter 4, VIA is linked with all sectors of the B.C. economy, including warehousing and distribution, tourism, manufacturing, and to a lesser extent the resource sector. Under the current structure, VIA has not been used as an economic development tool for the region and airport user charges and investment decisions are made somewhat in isolation of their local economic impact. This is also partly a result of Transport Canada's cross-subsidization policy among airports.

Criteria related to economic development are as follows:

- level of local involvement: ability to reach out into the community for input and support on defining investment and corporate strategies. VIA must be able to listen but also respond positively to local concerns.

- ability to respond to economic development opportunities: ability to work in collaboration with local interests and governments and their respective economic development associations and consider local economic impacts when making investment decisions, defining marketing strategies and implementing corporate plans.

- pricing policy: When deciding on airport user charges (landing fees, concession rates, parking, etc) VIA must consider the overall financial health of the airport and the economic impact on the region. User charges set to cross subsidized uneconomic airports or be identical to other airports distort the system. Similarly, prices set strictly to maximize profits in the short term could be detrimental to regional economic development. The goal is to price to the best economic advantage of the VIA as a whole which, by encouraging economic activity, will provide regional economic benefits. And to do so without the necessity of regulatory agency to protect the consumer.

3. Financial Viability

The independent financial viability of VIA will depend on management's ability to make sound capital investment decisions, obtain financing on favourable terms, maintain effective controls over operating costs, maximize revenues from a range of activities, and stimulate a high level of productivity from available resources.

Accordingly, criteria related to financial viability are:

- ability to raise capital: the ability to raise capital at favourable rates in world money markets. Apart from the technical aspects of issuing bonds, this means an ability to earn a high bond rating, based on financial viability, and performance, in these markets.

- capital planning process and asset purchase: a capital planning process which is driven by sound commercial practise that considers market forces, financial viability and local needs, but it not driven by political considerations.

- financial accountability and cost controls: a responsive system of financial accountability that is able to implement cost control measures as the need arises.

- the ability to improve revenues: sound commercial management, including the essential element of effective creative marketing quickly tapping opportunities, that will result in higher utilization and increased user and concession revenues. assessment).

4. Relationship with Three Levels of Government

Aviation requirements and airport security and safety will remain the responsibility of Transport Canada regardless of the structure under which VIA operates. Accordingly, the chosen management structure must be compatible with working in such a regulated environment. VIA must also be able to work in close collaboration with the provincial and municipal governments in matters related to economic development, social/economic impacts, and public policy.

5. Productivity

- complexity of organization and contract procedures: overall, a management that is not complex in its organization and contract procedures, and therefore is highly responsive in its decision making to commercial opportunities.

- staff incentive schemes: the ability to reward staff for responding to commercial and economic development opportunities. Promotions are linked to performance and not necessarily based on seniority or experience. Senior appointments are not based on political affiliations but consider local reputation.

- Efficiency: The management structure fosters productivity and is able to recognize and reward growth in productivity.

- Labour issues/unions: The management structure encourages good labour relations to minimize interruptions due to labour disputes and fosters productivity. One important constraint is whether there will be successor rights to the existing labour contracts.

6. **Community support**: An airport needs the support of the local population to succeed. This includes the support of local businesses and municipalities, and overall public support.

ANALYSIS SUMMARY

In order to evaluate the management options, the advantages and disadvantages of each were evaluated against the above criteria. The opinions and expertise of Price Waterhouse and others were sought. In order to rate each option, a factor of 1 (the worst level) to 5 (the best level) was assigned to each criteria. The results of the analysis is presented in the following table with the ranking of each option against each criteria indicated in parenthesis, and the total score tabulated at the end of the table. While such a ranking system is undoubtedly subjective in some respects, it proved a useful tool in comparing management options.

As shown by the analysis, the local authority concept (public corporation) is clearly judged the most favourable option. The local authority concept was most suitable to stimulate economic development in the community, and along with the private sector, it is the most able structure to capitalize on market opportunities and operate on a self-sustaining basis. The local authority concept is the only option which scores high on all criteria.

This should come as no great surprise as there is substantial evidence that local authority management works well. Several recently completed studies (see Appendix 5-1) have examined airport management in great detail, and all have supported and recommended the local authority structure. Moreover, the airports run by a local authority in the United States and around the world have, by and large, been successful in maximizing their economic opportunities and have a good

TABLE 2

ANALYSIS OF MANAGEMENT OPTIONS

	MODIFIED TRANSPORT CANADA	FEDERAL CROWN CORPORATION	FEDERAL AIRPORT COMMISSION	PROVINCIAL CROWN CORPORATION	REGIONAL/MUNICIPAL COMMISSION	PRIVATE SECTOR	LOCAL AIRPORT AUTHORITY
DEFINITION	. A streamlined, decentralized department operation	. Corporation established through legislation - under federal control	. Established through legislation . Retain federal ownership and control	. Requires transfer from Canada to B.C. and operates under provincial legislation	. Requires transfer from Canada to GVRD	. Owned and operated by private sector (sold to highest bidder)	. Autonomous local entity which operates on a breakeven basis
MARKET ASSESSMENT							
. Reaction to competitive forces	. Limited responsiveness (1)	. Responsive (3)	. Responsive (3)	. Responsive (3)	. Moderately responsive (2)	. Extremely responsive (5)	. Very responsive (4)
. Marketing strategies	. Limited ability to identify strategies and slow to implement them (1)	. May identify adequate strategies but difficult to move quickly (3)	. May identify adequate strategies but difficult to move quickly (3)	. May identify adequate strategies but difficult to move quickly (3)	. Limited ability to identify strategies but difficult to move quickly (2)	. Identify and implement very quickly (5)	. Identify and implement quickly (4)
. Planning element	. Limited - driven by engineering considerations (1)	. Market driven but limited authority (3)	. Market driven but limited authority (3)	. Market driven but limited authority (3)	. Limited (2)	. Market driven and complete authority (5)	. Market driven and complete authority but community perspective represented on board (4)
. Revenue generation	. Some marketing focus but may be slow to respond (1)	. Marketing focus and quick response (3)	. Marketing focus and quick response (3)	. Marketing focus and quick response (3)	. Limited marketing focus quick response (2)	. Marketing focus and quick response (5)	. Marketing focus and good response (4)
. Level of entrepreneurship	. Rewards status quo (1)	. Risk taking not encouraged (2)	. Risk taking not encouraged (2)	. Risk taking not encouraged (2)	. Risk taking not encouraged (2)	. Very high - risk taking encouraged and rewarded (5)	. High - risk taking encouraged (4)
. Decision-making process	. Limited change/not responsive (1)	. Bureaucratic (2)	. Bureaucratic (2)	. Bureaucratic (2)	. Bureaucratic (2)	. Quick and efficient (5)	. Quick and efficient but community perspective represented on board (4)
ECONOMIC DEVELOPMENT							
. Level of local involvement	. Limited due to national focus (2)	. Local input but still a Federal focus (2)	. Local input but still a federal focus (2)	. Local input but a Provincial focus (3)	. High local focus (5)	. Limited concern of public good and overall economic development (1)	. High local focus (5)
. Responsiveness to opportunities	. National focus and limited ability to consider and respond to local economic impacts (2)	. National focus and limited ability to consider and respond to local economic impacts (2)	. National focus and limited ability to consider and respond to local economic impacts (2)	. Provincial focus and limited ability to consider and respond to local economic impacts (2)	. Local focus but limited ability to respond to local economic impacts (3)	. Linked to profits - limited (2)	. Local focus - will consider local impacts (5)
. Pricing policy	. Cross-subsidization and high rates (1)	. Cross-subsidization and high rates (1)	. Cross-subsidization and high rates (1)	. Cross-subsidization and high rates (1)	. Cross-subsidization within municipal budgets (2)	. Could lead to unregulated pricing (2)	. Fair pricing (mandate to breakeven) (5)
FINANCIAL VIABILITY							
. Ability to raise capital	. Non-existent (1)	. Fairly limited (3)	. Fairly limited (3)	. Fairly limited (3)	. Limited (2)	. Equity and bond (5)	. Bond issues (4)
. Capital planning process	. Fairly low accountability (1)	. Better accountability (3)	. Better accountability (3)	. Better accountability (3)	. Moderate accountability (2)	. Very accountable (5)	. Much better accountability (4)
. Purchase of assets	. Directly linked to federal purse and local needs (1)	. Linked to federal purse and local needs (2)	. Linked to federal purse and local needs (2)	. Linked to provincial government and local needs (2)	. Linked to municipal government (1)	. Linked to profits (4)	. Linked to local needs and financial viability (5)
. Financial accountability	. Fairly limited - part of government budgeting process (1)	. Some accountability but remains linked to government budgeting process (3)	. Some accountability but remains linked to government budgeting process (3)	. Some accountability but remains linked to government budgeting process (3)	. Some accountability but remains linked to municipal budgeting process (2)	. Very good - accountable to owners/shareholders (5)	. Mandate to break even and accountable to board of directors (4)
. Cost controls	. Fairly limited - still a government department (1)	. Average - still linked to government (3)	. Average - still linked to government (3)	. Average - still linked to government (3)	. Modest - still linked to municipal government (3)	. Very good - financially accountable (5)	. Good - must be at least breakeven (4)

PRODUCTIVITY . Labour Issues/Unions	. Status quo (3)	. Successor rights and good relations (3)	. Successor rights and good relations (3)	. Successor rights and good relations (3)	. Successor rights and good relations (3)	. No successor rights but labour climate could be adversarial (3)	. Negotiated labour contracts . No successor rights . Good relations (4)
. Complexity of organization	. Largely unresponsive bureaucratic system (1)	. Bureaucratic (2)	. Bureaucratic (2)	. Bureaucratic (2)	. Bureaucratic (2)	. Very responsive (5)	. Private sector oriented and very responsive (5)
. Complexity of contract procedures	. Very complex government procedures (1)	. Flexible but federal control (2)	. Flexible but federal control (2)	. Flexible but provincial government control (2)	. Municipal control and procedure (2)	. Very flexible (5)	. Flexible (4)
. Staff incentive schemes	. Not directly linked to performance and some political appointments (1)	. Not always linked to performance and some political appointments at senior levels (3)	. Not always linked to performance and some political appointments at senior levels (3)	. Not always linked to performance and some political appointments at senior levels (3)	. Not directly linked to performance and some political appointments at senior levels (2)	. Linked to performance (5)	. Linked to performance and limited opportunity for political appointments (4)
. Efficiency	. Limited potential to encourage and reward efficiency (1)	. Some potential to encourage and reward efficiency (3)	. Some potential to encourage and reward efficiency (3)	. Some potential to encourage and reward efficiency (3)	. Limited potential to encourage and reward efficiency (1)	. Potential for higher efficiency - linked to profits (5)	. Commercialization - will likely improve efficiency (4)
RELATIONSHIP WITH THREE GOVERNMENT LEVELS	. Understands need to comply willingly to regulations (4)	. Understands need to comply willingly to regulations (4)	. Understands need to comply willingly to regulations (4)	. Understands need to comply willingly to regulations (4)	. Understands need to comply willingly to regulations (4)	. Could be adversarial (2)	. Understands need to comply willingly to regulations (4)
COMMUNITY SUPPORT	. Limited (2)	. Limited (2)	. Limited (3)	. Limited (2)	. Very limited (1)	. Open to criticism if viewed as subsidies to private sector (1)	. Very strong (5)
SCORE							
. MARKET ASSESSMENT	1.0	2.7	2.7	2.7	2.0	5.0	4.0
. ECONOMIC DEVELOPMENT	1.7	1.7	1.7	2.0	3.3	1.7	5.0
. FINANCIAL VIABILITY	1.0	2.8	2.8	2.8	2.0	4.8	4.2
. RELATIONSHIP GOV'T	4.0	4.0	4.0	4.0	4.0	2.0	4.0
. PRODUCTIVITY	1.4	2.6	2.6	2.6	2.0	4.6	4.2
. COMMUNITY	2.0	2.0	3.0	2.0	1.0	1.0	5.0
TOTAL SCORE	11.1	15.8	16.8	16.1	14.3	19.1	26.4

NOTE: Numbers in parenthesis indicate the relative score of each option against each criterion, 1 being the "worst" score and 5 being the "best" score. Equal weight is given to each major heading.

reputation. They responded to the new logistical realities and are typically more marketing and commercially-oriented than is the case in Canada. For example, the New York/New Jersey Port Authority, which manages the port as well as the airport, takes an aggressive approach to marketing, arranging seminars for travel agents, having offices in major centres and working with airlines and federal negotiators in the bilateral process. The Seattle authority is also very much marketing-oriented, working closely with convention offices and tour operators, as well as the marine division, to play a key role in regional economic development.

Finally, local airport authorities have a good reputation in the business community. In the U.S. airport authorities have had good bond ratings (typically "A" to "AAA" (Standard and Poor's) for medium to large size airports) partly because of their ability to generate revenues through a passenger head tax and because of their good track record. In Canada the local authority would have the mandate to operate on a break-even basis, and as such would be required to obtain financing on its own. While financial viability will depend on the terms upon which the airport is transferred to the local authority, it is expected the Authority would be self financing, most likely through the long term bond market in Canada. Canadians should expect the same high level of performance from their airports under a local authority as has been the experience elsewhere.

The analysis, on the face of it, also gives favourable ratings to the private sector option. Although this option is attractive in the important area of financial viability and commercial objectives, the "privatization" option is not recommended from an economic development and a public policy standpoint. In fact, the private sector option has the lowest rank of all options when evaluated against criteria related to economic development and maintaining a good working relationship with the three levels of government. Given our view that the VIA must work closely with regional governments to co-ordinate economic development goals and with Transport Canada on air safety and other operational matters, this could be a serious shortcoming.

A private sector purchase has a number of other limitations. Unlike a transfer to another public authority, a private company would be expected to pay a handsome acquisition cost which would seriously weaken its financial viability. Unlike a public local authority which can afford to take a long range view a private company would more likely seek a quick return on its capital investment. It is also extremely unlikely the federal government would want to risk the airport being taken over by a single airline or other user and will demand limitations on shareholdings that might negate some of the private sector advantages. It is almost certain, given the close relationship between the federal government with its responsibility for airport safety and navigation and the airport operator, that a private sector operator could expect to come under a highly regulated system which could slow decisions and increase government controls beyond what a publicly-owned entity might expect. Finally, airports are part of the transportation life line of the community and, with all their commercial orientation, have a public responsibility to discharge.

Of all the government or quasi-government options examined, the Federal Commission is the most acceptable, mainly because it has the best opportunity to incorporate local concerns and make financial decisions quickly. Even here, however, the need for annual approvals of major programs and expenditures and the reliance, ultimately, on government financial backing suggests the entity will not be independent enough to take the type of action modern airport management requires.

The Regional/Municipal Commission is not acceptable from a financial viability and market assessment standpoint. Under a municipal structure VIA would be subject to short horizon political influence and would not have sufficient authority to respond to market demands and meet commercial opportunities on a timely basis. The capital budgeting process would remain linked to the municipal governments and other priorities which may have nothing to do with transportation. As with any level of government, many of the procedural problems remain and while it is the level of government closest to the local community, the inherent problems remain. To date the municipal governments have shown little interest in assuming the financial and other obligations of operating the VIA.

With regards to the Federal or Provincial Crown Corporation, while much would be gained in terms of financial accountability and improved asset management they remain essentially government run operations with the delays inherent in such a system. A transfer to a provincial crown corporation just substitutes one bureaucracy for another. Because of the limited local involvement and the relatively bureaucratic and non-entrepreneurial focus of a Crown Corporation, these options are only a marginal improvement on the status quo.

The Modified Transport Canada option fares rather poorly, as the only significant change would be the addition of a marketing and planning function to the existing structure. Such a change, while moving in the right direction, does not come to grips with the inherent problems of a structured and slow moving bureaucracy administering a national system.

In summary, the analysis confirms what has been demonstrated globally, a local authority is the most effective model for a community to manage its vital air links to the rest of the country and the world.

Given the changes in air transport systems, the challenges created and the need for a changed perspective in marketing and operations, the opportunity costs and, as other airports respond to capitalize on these opportunities, the real costs, demand bold action. Almost universally, the major air carriers and airport operators and users support the transfer of management responsibility to a local authority. The previous studies, the experiences of other jurisdictions and the analysis of the comprehensive management criteria discussed here, all strongly point to the same conclusion.

The existing federal system, while competently administered and effective within its mandate, is not structured to respond to the needs of a fiercely competitive market. Any large organization must be concerned about precedents set by decisions, and how decisions made in one location will elicit calls for similar treatment elsewhere. The Canadian federal system serves many constituencies and is unlikely to pursue programs which clearly benefit VIA but can not be justified as national policy. It is constrained in capital decisions by political vagaries, capital rationing and concerns about regional equity. The federal system is generally incapable of making rapid decisions, especially decisions which require immediate capital expenditure. While many of these aspects of a national system are strengths, in the context of airport management in the 1990's and beyond, they are a serious impediment to making VIA a truly world class airport.

Conclusions:

1. The local authority concept is the most attractive management option.

2. The existing federal system, while competently administered and effective within its mandate, is not structured to respond to the needs of a fiercely competitive market. The Canadian federal system serves many

constituencies and is unlikely to pursue programs which clearly benefit VIA but cannot be justified as national policy.

3. Local control of airport management will be more responsive and better able to complement and initiate other local activities, such as development of a free trade zone, tourism and other Pacific Rim marketing initiatives.

4. A local structure will allow key employees to develop within the VIA system and stay on to guide future program once they have mastered their areas and built valuable community contacts.

5. The local management organization should be free from direct political direction and fiscal policies. A local airport authority must be able to collect its own revenues and make its own spending decisions based on sound business principles. The Local authority would have the mandate to operate on a break-even basis, and as such would be required to obtain financing on its own, most likely through the long term bond market in Canada. Canadians should expect the same high level of performance from their airports under a Local authority as has been the experience elsewhere.

6. The airport authority should be structured to allow input of affected parties. This will include direct airport users (such as air carriers) as well as ultimate users (such as shippers, distributors, tour participants). The importance of the airport to the local economy and environment also requires local community representation.

CHAPTER 6: THE AIRPORT AUTHORITY CONCEPT

THE AUTHORITY STRUCTURE

General

The term "airport authority" in Canada is widely understood to be an American concept. In reality, variations of a basic authority structure are in place in Germany's major airports, in Denmark, and in Holland, as well as in a significant number of U.S. sites. In the summer of 1987 the British Airport Authority was changed from a Crown corporation to a private corporation. Appendix 6-1 lists U.S. authority airports, both airports alone and multi-purpose (airport and port) authorities.

Each airport authority tends to be uniquely structured at the detailed level, to best suite local conditions, but the general pattern is a structure which:

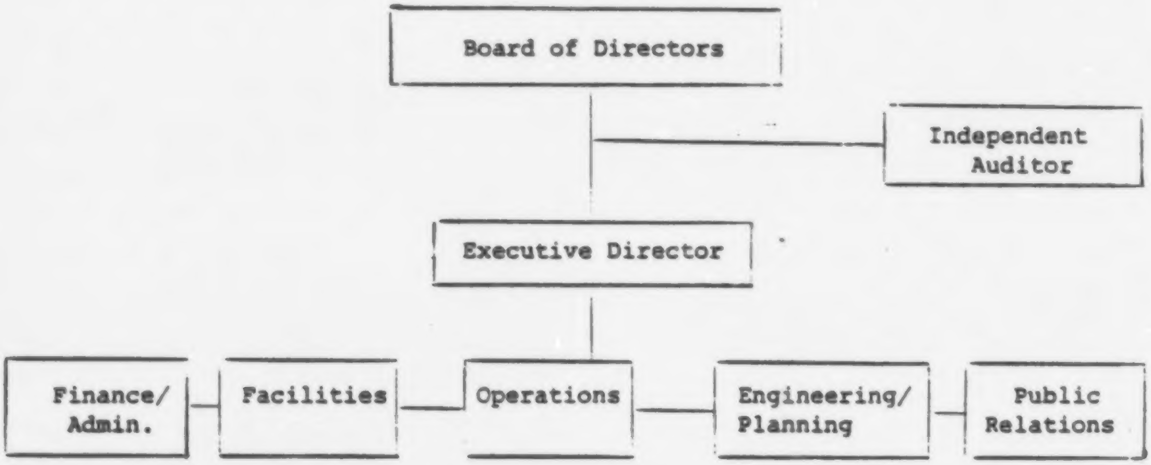
- isolates the airport or airports from direct political direction.
- provides the airport or airports with access to private capital markets, and with a financial structure to permit the issue of debt.
- mandates the airport to operate efficiently and on a businesslike manner, with no access to municipal or provincial funds.
- provides the executive of the airport with sufficient authority to manage effectively.
- reserves policy and budget decisions to a board of directors.

- recognizes the interdependence of the airport and its users.
- has full title to and responsibility for airport property and operations.
- is required to pay property taxes to the municipality for at least part of its facilities.

The structure described here is a composite of several successful airport authorities, intended to provide a general picture.

Board of Directors

Full time administration and management is conducted through a permanent professional staff headed by an executive director (or Airport General Manager) hired by and reporting to a board of directors. A typical authority structure is depicted below.


Board of Directors
Independent Auditor
Executive Director
Finance/ Admin.
Facilities
Operations
Engineering/ Planning
Public Relations

As in most commercial enterprises, the board establishes policy and the Authority staff implements the policy decisions. These decisions are conveyed to the management team through directives and standard operating procedures.

The constitution and modus operandi of the board of directors is a major factor in the financial and managerial success of airport authorities. Depending on the authority, board composition may be specified, dictating that the board must be composed of a lawyer, professional engineer, representatives from business, industry, finance, local municipalities and so on and, comprehensive conflict of interest codes are common. It is also normal practice to create long and staggered terms (e.g. one appointment per year for seven years) in order to prevent political domination. The method of board appointments varies. At U.S. sites, some authorities have their boards elected by a vote of city council, and some are appointed by the mayor. Board appointments in Germany reflect the three way shareholdings of airports: federal, state and local, in proportion to shares held. The same practice is followed at Schiphol (Amsterdam). Board members are normally not paid, although some authorities pay expenses.

Board meetings are public (with adequate public notice) and regularly scheduled. Special meetings may be called by the chairperson or any two members. Within the board, there commonly exists Standing Committees, normally structured by primary function and corresponding to the organization structure of the airport.

Although individual authorities may differ, the board generally retains approval for such items as the annual operating and maintenance budget, capital improvement program, contracts for professional services, large purchases or contracts, important leases, dismissal of staff, disposal of real property, airport master plans, land use plans, and air service improvement programs.

For the Vancouver International Airport Authority, the following criteria are proposed for the design of the Board:

- The mandate of the Board should be to provide business policy guidance, not to provide direct political input from any level of government. This suggests:
  - specific exclusion of elected officials, their staff or public servants;
  - identification of the minimum qualifications for Board participation in any enabling legislation or articles of incorporation;
  - Nomination of Board members by community interests to provide the broadest possible representation. This could include nominations from each major municipality, the GVRD and the provincial government representing the broader interests of the airport catchment area. Federal nomination of a board representative would be an outcome of negotiations. If Transport Canada retains a financial involvement in the airport, nomination to the board is required. There should be at least an ex-officio member recognizing the financial impact of federal transportation policies and that the airport must function as part of a national system.

The Executive

The day to day operation of the Authority is carried out by a full-time professional staff under the direction of the Executive Director. The structure and organization vary from site to site. The Authority maintains the flexibility to have an extensive organization or may opt for a leaner full time staff organization and make extensive use of contracted services. The flexibility also exists at each site to alter the organization to meet the current situation of the individual authority; e.g. during periods of extensive capital development full time engineering staff may increase 2 to 3 times in response to the demand. Upon completion, staff levels are reduced.

The development of a detailed structure for an authority that evolves from a public service operation requires a "zero-base" approach. The Edmonton Airports Authority Task Force took the approach that functions currently being performed at Transport Canada Regional offices would, if transferred to the airport level, require additional management staff. A 1980 Study by the Task Force on Airport Management, which compared 3 Canadian and 3 U.S. authority airports of comparable size, came to the conclusion that the management staff levels at Canadian sites were equal to or exceeded those at comparable U.S. sites, and that the duties could be absorbed by existing positions, with some re-organization.

For Vancouver, a detailed review of functions and work loads of managers in the current structure and an analysis of requirements for authority operation would be needed, in consultation with affected parties, to arrive at a specific plan. Vancouver International currently has a total of 221.5 Transport Canada person years, (232 employees) of which 49.5 are management and administration and an additional 20 which are classified as terminal services.

In addition to the Executive Director, the executive would include a range of officers and managers to cover the management areas such as marketing, finance, administration, operations and maintenance, security and public relations. Appendix 6-2 illustrates a preliminary concept of structure for an airport Authority at Vancouver to operate Vancouver International only. Appendix 6-3 illustrates a tentative structure for a multiple airport operation. For the authority structure proposed, Appendix 6-4 outlines the responsibilities of each key position.

Span of Operations

Airport Authorities have been established to operate only one airport or to operate a system of airports serving an urban area. For Vancouver, the issue will be whether the Authority should operate only Vancouver International Airport, or whether it should operate VIA plus one or more of the local airports. Special consideration should be given to Boundary Bay, Pitt Meadows, Langley and Abbotsford. The acquisition of the downtown heliport should also be considered. The criteria for determining which of these airports, if any, should be included in the authority's mandate include:

- current and forecast needs for general aviation reliever airports for VIA.
- the impact on overall financial viability of incorporating each of these relievers in the span of operation.
- current management structure at the reliever sites. For example Boundary Bay could be difficult to acquire even if it was a desirable objective.

U.S. cities that have included one or more relievers in the airport authority's mandate have been successful in ensuring the financial viability of the system and in providing for general aviation needs. The air carriers have shown a willingness to contribute to cross-subsidization of relievers from the major airport if general aviation traffic is discouraged during peak periods at the major airport.

Multi-Purpose Authorities

Many of the major U.S. airports (including Seattle, Boston and New York) are managed by multi-purpose authorities operating airports, ports and in some cases, other urban infrastructure. In the U.S., the original Port of New York Authority was established to operate port facilities in two state jurisdictions. In 1947 because of its success with the ports, it was expanded to include airports.

The multi-purpose authorities tend to be higher overhead operations than dedicated airport authorities, and there is little commonality in planning, engineering or marketing services. A multi-purpose authority would be suitable for Vancouver if:

- There is the potential to more fully develop the air-sea link concept than would otherwise be the case.
- There is an interest on the part of Ports Canada in divestiture. Given the history of port decentralization to date, further action on ports may not be forthcoming.
- The incremental benefits of a multi-purpose authority exceed the incremental overhead costs. Dedicated airport authorities in the U.S. have overhead staff costs (for planning, engineering and administration) in the range of 15% of total staff costs.

While the need for an inter-modal transportation capability is clear, the case for a single multi-purpose management structure is less obvious.

THE AUTHORITY IN OPERATION

The authority takes on the full range of responsibilities for airport operation and development, including day to day operations and maintenance, land use planning, business requirements development, financing, design and construction.

Day to day operations will resemble current practices in many aspects. Transition will be evolutionary and will be the result of:

- site focused management information systems.
- improved labour relations through direct management-labour dealings and decision making.
- enhanced labour flexibility.
- more aggressive marketing of the airport in terms of air service, revenue generating activities and non-aviation uses of airport land.
- a bottom-line focus.

Staff Relations

The movement of an airport from a federal public service operation to an authority creates both challenges and opportunities.

The challenges arise primarily from the insecurity that will be felt by staff in moving from the known to the unknown. Pro-active planning can reduce or eliminate this insecurity through:

- a strong approach to job security for incumbents.
- sensitivity in the development and carry over of benefit packages.
- development of a concise policy manual dealing with all aspects of employee relations including selection criteria, promotion, hiring, firing, benefits etc. and making this manual available to staff.

The opportunities that arise from authority operation are for improved staff utilization and overall efficiency with improved staff relations. While these may seem contradictory, the ability of airport management to deal directly with employees on issues has been demonstrated to contribute to achieving these goals.

Plans, Control and Financial Structure

Board review of the business plan, master plan, annual operating budgets and annual capital plans are the key controls on the authority. The other major control can be the covenants with debt holders. The U.S. experience suggest airport bond indentures and bond issues may:

- identify the purpose of the issue and how the funds will be used including capital works, purchase of earlier debt issues, replenishment of reserves and land acquisition reserves.

- identify all covenants that the authority makes in issuing bonds including protections against defaults and the legal framework for application of funds. The authority is require to covenant that:
  - there is no outstanding litigation against the authority.
  - the identified land acquisition and construction will be completed with dispatch.
  - it will manage in accordance with sound business practices.
  - it will submit to independent audit.
  - it has and will retain adequate insurance.

- require the authority to identify its operating policies which serve as security; user agreements, reserve funds, insurance, etc.

- contain an auditor's report on the current and forecast financial health of the authority.

- require an airport consultant's report on the historical and forecast growth of traffic at the airport and on airport costs and revenues.

- include a financial feasibility report by an independent airport consultant.

- include specific debt coverage ratios to be achieved.

The internal controls and the obligations to debt holders have been sufficient at U.S. authorities to keep them on a sound financial basis indefinitely and there is a good "track record" in the money markets.. There is no reason why the same success cannot be achieved in Vancouver. Appendix 6-5 provides a summary of new airport bond issues between 1978 and 1982 in the U.S. and describes the financing situation.

Financing in the Canadian Context

While the U.S. experience with airport capital project financing substantiates the viability of private financing for airport development, the financing structure in Canada will likely be somewhat different. U.S. taxation rules which permit airports to issue tax-free bonds which have encouraged the use of bonds as the debt instrument. In the Canadian context, more flexibility is likely. One financing package for $425 million for Toronto's Terminal 3 included a preferred share issue as well as first mortgage bonds targetted at institutional investors. A Canadian airport authority would likely involve an investment banker at each major capital financing to tailor a package which would attract financing at the lowest possible cost. A preliminary examination of VIA projections by Richardson Greenshields of Canada Limited concluded that, given the correct balance of revenue generating capability, capital and expense budgeting and favorable market conditions, a Local Authority could successfully access the Canadian long term debt market.

Capital Development

Typically the development of major capital projects at an airport authority involve the following steps:

1. The Master Plan

The master plan identifies the requirement for a capital project and places it in the context of the overall airport development.

2. The Business Plan

The business plan identifies the business justification for a capital project and its financial feasibility.

3. The Letter of Intent

The letter of intent results from discussions with the air carriers serving the airport, and provides user recognition that the project will be needed and is in the best interests of the airport community. The reason for this step is to provide a reasonable foundation for committing funds to design and development planning.

4. Development Plans, Designs and Estimates

Development plans, designs, and estimates are project specific. The development planning phase includes preparation of a statement of requirements, flow models, etc. to yield a complete concept of need. Designs turn the need into a facility design. Estimates are prepared in sufficient detail to permit financing with the confidence that the financing raised will be adequate.

5. Financing

A private financing of airport capital development has not been undertaken in Canada. Toronto's Terminal 3 will be a first in this area. To examine the performance of airport investments it is necessary to look at the U.S. experience. (See Appendix 6-5 and the earlier discussion of Financing in the Canadian Context.)

6. Development

Once financing is in place, the development and construction phase starts. Because financing is arranged in advance, construction is normally undertaken as rapidly as possible to reduce the likelihood of cost overruns. As a general rule authority airports tend to retain only a skeletal staff of engineering expertise and contract out the design, project management and construction management of all but very small projects.

RELATIONSHIPS

An appropriately structured and staffed authority will have an entrepreneurial focus that will contribute to a cooperative, mutually beneficial relationship with air carriers, other aviation users, concessionaires, tenants and the community.

Air Carriers

Leases or user agreements provide the cornerstone to an unambiguous airport-airline relationship. The broad intent of these agreements and leases is to establish the rights and responsibilities of the airport and the carriers. Many of the U.S. agreements contain a deficiency agreement which obligates the carriers to offset any deficiencies in operating revenues or debt service requirements through adjustments to landing fees. The quid pro quo for this deficiency agreement can be carrier review or veto of operating and capital budgets.

The need for the deficiency clause is defined by capital requirements. If capital can be raised without the provision, it need not be included in the user agreement, and air carrier review of budgets need not be obligated in the agreement. More and more agreements are being implemented without deficiency agreements.

An authority at VIA should attempt to operate without the deficiency clause and only include it in airport-air carrier agreements if obligated to do so by debt holders.

Because user agreements at different U.S. airports involve many of the same carriers, there is a similarity between these agreements. The variations tend to reflect the relative strengths of the parties involved at the time of agreement.

Appendix 6-6 summarizes the key clauses typically found in user agreements and indicates their use at 28 U.S. airports and Appendix 6-7 describes involvement in airport budgeting for the same airports. Appendix 6-8 details the issues normally covered in an air carrier-airport user agreement.

Other Aviation Users

Based on the practices of airport authorities elsewhere, we can expect an airport authority to develop a relationship with general aviation users that is somewhat different than todays:

- general aviation users will be seen as a customer and new or improved services and facilities will be actively pursued where these make business sense. For example, the provision of individual T-hangars for small aircraft is relatively common in the U.S. because it provides a good return to the airport.

- as market tests are applied to each service or lease and rates for existing services and facilities are adjusted accordingly.

Concessions

An aggressive authority views concessions not only as a major source of revenue, but also as part of the airport's image for service. Concessions will be seen as a commercial partner. Competition and innovation in concessions will be encouraged, and flexibility incorporated in concession agreements to provide for updating to match changing consumer tastes. Concession agreements will:

- be optimized, rather than maximized on a percentage basis, so that overall yield is maximized. With a view to maximizing yield, an authority may share risks and expect less minimum guarantees.
- be structured to ensure high levels of services with reasonable prices.
- be enforceable.

Inspection Services

Transport Canada currently provides processing and office space for Canadian Inspection Services free of charge. It is anticipated that an authority would continue this practice to avoid the possibility of a charge back to the airport for customs and immigration passenger processing. The cost of space for U.S. inspection services is recovered directly from the air carrier and this practice would likely continue.

Land Use - Tenants

Vancouver International is uniquely blessed with an extensive base of developable land which may not be required for aviation uses. The ability to develop land effectively is a product of:

- a commitment to maximizing non-aviation revenues.
- recognition that land resources are the airports most important commercial product.
- a commitment to community economic health.
- the ability to make deals and to tailor the packages to meet the needs of the lessee.
- the ability to move quickly to fulfill commitments.

The Community

A local authority must be responsive to the local community. Specific mechanisms include:

- community involvement in the master planning process (as Transport Canada currently does).
- a "sunshine" approach to authority board actions including public access to board meetings.
- active participation of the authority's managers in community economic development

In Vancouver, an authority will be subjected to conflicting pressures, the most important of which will be aircraft noise versus growth. Local authority operation will force the community to come to a consensus on issues such as these. Both the structure of the authority and its mechanisms for community relationships will need to be developed with the knowledge that there will be conflicting interests which will need to be dealt with if the airport is to contribute to the economic health of British Columbia in a responsible way.

SYSTEM INTEGRITY - THE RELATIONSHIP WITH TRANSPORT CANADA

Approximately 84% of Canada's airports are operated by parties other than Transport Canada: municipalities, provinces, corporations and airport commissions. This group includes several airports of reasonable size and complexity; Sudbury, Hamilton and Edmonton Municipal. For a detailed review of Canada's airport management structure see Appendix 6-9.

Policies and practices exist delineating the responsibilities of Transport Canada and of the airport operator. The two key areas of interest to Transport Canada are security and airside safety. In addition to remaining the provider and operator of air traffic systems, Transport Canada would remain the regulator and inspector in safety and security.

Airside Safety

As the regulator for airside safety issues, Transport Canada through an inspection and airport certification process will monitor facilities, operational plans, and practices with respect to crash fire rescue, airfield pavement maintenance, snow removal and ice control, airfield grassed area maintenance and airport vehicle control.

Security

Transport Canada will retain an active role in airport security. Because the airlines will also continue to be involved in passenger screening, responsibilities for security will be split between the authority, Transport Canada and the airlines. At a major international airport this will be a complex issue that will require a detailed agreement. The complexity is increased by the multiple functions provided by police, (traffic control, parking control, property protection, aircraft and apron security). The key issue to the security area will be the allocation of costs for these diverse functions, and control over police activities.

Planning Coordination

The authority will be required to involve Transport Canada in its master planning and in capital project implementation. The airport master plan will be reviewed for aviation compatible land uses and from a safety perspective. Capital project will require close coordination with Transport Canada in the planning and implementation phases to:

- incorporate Air Traffic needs and views
- ensure Air Traffic sight lines, communication channels or navigation aids are not affected by the development.
- ensure that construction traffic is separated from taxiing aircraft.

CONCLUSIONS

1. While there are still issues to be resolved, a plan to create and operate an independent self-financing local authority at Vancouver International Airport is sound and feasible.

2. The policy of the local authority should be determined by a Board of Directors representing a broad range of community interests.

3. The local authority should be responsible for management of VIA and such other airports as a review of operational requirements suggests. The authority would work closely with west coast ports but not incorporate them within the same management system at this time.

4. Financing of the authority in private capital markets is possible, provided sound business practices are followed.

CHAPTER 7: FINANCIAL VIABILITY

Financial Viability

Whatever the advantages for airport operations and regional economic development of a local authority at the Vancouver International Airport, undertaking such a project would only make sense if it was economically viable to do so. While a financial analysis of the future of the VIA must necessarily include a number of variables, such as acquisition costs and capital requirements, there appeared to be enough information to undertake at least a preliminary analysis.

To assess the financial viability of VIA, financial projections over 19 years were developed, using the Transport Canada Financial Projection System. The figures were based on past performance, current information and a series of assumptions.

The data for the initial year of the projections, labelled 1987/88, were the 1985/86 financial results, amended to reflect the Transport Canada Salary Costing 1987/88, and to provide for a contingency of approximately 10 percent of operating expenses.

The estimates of growth in plane movements and passenger volume were provided by Transport Canada.

All other assumptions of changes in the Airport's financial structure and growth rates were selected on the basis of their significance to costs and revenues, and their likelihood of occurrence. In this respect, a list of financially sensitive factors was compiled. The factors that were rated to be highly significant and virtually certain of occurring (see definitions at the foot of the page overleaf), were included in a first set of projections called the "base case". The factors that were rated to be highly significant and highly likely to occur, were included in a second set of projections call the "speculative case". Two versions of each of these cases were produced, the second assuming the need for larger capital expenditures.

All the projections are in constant dollars; in other words, without any inflationary growth. Consequently, the interest rate on borrowing is pegged at five percent, being the assumed "real" return to lenders.

PRICE WATERHOUSE FINANCIAL VIABILITY STUDY

LISTING OF FINANCIAL SENSITIVITY FACTORS

FACTOR	DESCRIPTION	SIGNIFICANCE	LIKELIHOOD OF OCCURRENCE	INCLUDE IN PROJECTIONS
Markets	1. Passenger and air cargo traffic increases as a result of marketing to potential visitors	High	High	Speculative Case I
	2. New concession opportunities are identified	High	High	Speculative Case I
	3. New industries are attracted to the airport area	Medium	High	
	4. Special enterprise zones are introduced at the airport	High	Medium	
	5. Competition from Vancouver, GVRD, Richmond for commercial clients drives lease prices down	Medium	Medium	
Revenues	6. Air Transportation Tax retained by the Federal Government	High	Virtually Certain	Base Case I
	7. New lease revenues commence from the Federal Government for RCMP, Air Traffic Control, Customs, Immigration, etc.	High	Medium	

Significance: Very High - in excess of $50 million; High - in excess of $2 million; Medium - $1-2 million; Low - less than $1 million

Likelihood: Virtually Certain - 91% to 100%; High - 76%-100%; Medium - 50%-75%; Low - less than 50%

FACTOR	DESCRIPTION	SIGNIFICANCE	LIKELIHOOD OF OCCURRENCE	INCLUDE IN PROJECTIONS
Revenues (continued)	8. Airport landing taxes are reduced because of pressures from carriers, deregulation, and claims that carriers have already paid for capital assets	High	Medium	
	9. Peak period surcharges are introduced	Low	High	
	10. Revenues decline during runway and terminal construction	High	Medium	
	11. Opportunities to increase Airport lease revenues are delayed because of existing long-term contracts	Medium	High	
	12. Concession revenues increase on renegotiation of leases	Medium	High	
Expenses	13. Liability insurance premiums commence	Medium	High	
	14. Payments commence toward unfunded pension liabilities	Medium	High	
	15. Salaries bill cut by introducing staffing efficiencies	High	High	Speculative Case I
	16. Overall expenses cut by more effective budgetary control	High	High	Speculative Case I

FACTOR	DESCRIPTION	SIGNIFICANCE	LIKELIHOOD OF OCCURRENCE	INCLUDE IN PROJECTION
Expenses (continued)	17. Federal Departments (e.g. TC, RCMP, Public Works) start charging for services	High	Low	
	18. Headquarters and Regional Overhead allocations are eliminated (1)	High	Virtually Certain	Base Case I
	19. Airport security costs increase	Medium	Medium	
	20. Air Traffic Control paid by Federal Government out of Air Transportation Tax	High	Virtually Certain	Base Case I
	21. Expenses are incurred in establishing a Local Authority	Medium	High	
Assets/ Capital Expenditures	22. Air traffic control equipment is upgraded	High	Low	
	23. New runway is added in 10 years	Very High	Medium	Speculative Case II
	24. New terminal is added in 10 years	Very High	Medium	Speculative Case II

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(1) Headquarters and Regional Overhead is assumed to be eliminated on the basis that the Salary Costing 1987/88 (used in the "base case" projections) includes a transfer effective April 1, 1987 of ten person-years of administrative and technical personnel under the heading of Restoration and Expansion.

FACTOR	DESCRIPTION	SIGNIFICANCE	LIKELIHOOD OF OCCURRENCE	INCLUDE IN PROJECTIONS
Assets/ Capital Expenditures (continued)	25. New concession premises are built	Medium	High	
	26. New commercial/industrial premises are built	High	High	Speculative Case I
	27. Airport access roads/ transportation systems are improved	High	Medium	
	28. Air carriers request capital improvements to increase their efficiency	Medium	Medium	
	29. Future capital expenditure needs are understated by Transport Canada	High	Medium	
Liabilities				
	30. Debt servicing commences	High	High	Base Case I
	31. Unfunded pension liabilities are assumed	Medium	High	
Financial Structure				
	32. Airport facilities are leased from the Federal Government	High	Medium	
	33. Airport is purchased from the Federal Government	High	High	See Net Present Value calculation
	34. Federal Government finances Airport purchase through long-term debt	Medium	High	

FACTOR	DESCRIPTION	SIGNIFICANCE	LIKELIHOOD OF OCCURRENCE	INCLUDE IN PROJECTIONS
Management	35. Airport marketing and expansion conflicts with CAIL, AC and other Canadian airlines who desire less competition from the U.S.A. or from offshore airlines	Medium	High	
Staffing	36. Airport marketing commences	Medium	High	
	37. Community relations program commences	Low	High	
Taxation	38. New taxes are introduced on Airport and/or Airport services (e.g. VAT)	High	Medium	
Operations	39. Capacity constraints limit traffic, concessions, industrial growth and revenues	High	Medium	
Technology	40. Airport equipment becomes obsolete prematurely	High	Low	
Community Involvement	41. Community involvement retards Airport growth and capital construction	High	Medium	
Land Use	42. Airport land use is restricted by Federal policies and contractual arrangements	High	Low	

FACTOR	DESCRIPTION	SIGNIFICANCE	LIKELIHOOD OF OCCURRENCE	INCLUDE IN PROJECTIONS
Ownership Structure	43. Decisions are made on social or political bases thereby adding to Airport operating costs	Medium	Medium	
Transportation Systems Integration	44. Increase transportation integration leads to increased passenger and freight volumes	Medium	High	
Federal Services	45. Services, assets and related expenses necessary for Airport operations are not captured in VIA financial statements (e.g. Auditor General, Aviation Group of TC, Public Works)	High	Medium	
Deregulation	46. Deregulation reduces air carrier profit margins which result in airlines shopping for lower airport charges	High	Medium	

BASE CASE I

Base Case I assumes that VIA is taken over from Transport Canada and no new initiatives are taken to increase revenues, reduce costs, change the capital program etc. Detailed assumptions are:

Revenues

1. Airfield Fees and Concessions (except Permits and Licenses - no growth) - Growth equal to growth in plane movements, provided by Transport Canada.

2. Passenger and Cargo, Fees and Concessions, Terminal Concessions and Groundside Concessions - Growth equal to growth in passengers emplaning and deplaning, provided by Transport Canada.

3. Industrial Rental, Leases and Concessions (except Flight Kitchen and Restaurant Food Concessions) - Growth equal to growth in industrial operating costs.

4. Flight Kitchen and Restaurant Food Concessions - Growth equal to growth in passengers enplaning and deplaning

5. Fees and Rentals, Other Government Departments - No growth.

Operating Expenses

6. Salaries, Wages, and Benefits - No growth

7. Materials and Supplies, Purchased Services, and Other Direct Operating Costs - Growth equal to growth in passengers emplaning and deplaning

8. Depreciation - Based on useful life of assets:

- Buildings 25 years
- Equipment (mobile and other) ten years
- Runways and other surfaces 25 years

9. Other Expenses - Growth equal to growth in passengers enplaning and deplaning.

10. Bad Debt Expenses - None

11. Grants in Lieu of Taxes (Property Taxes) - No growth

12. Interest on Long-Term Debt - 5 percent compound interest on annual balance outstanding.

Balance Sheet

13. Accounts Receivable - 15.5 percent of Revenues, based on past experience.

14. Inventory - 22.6% of material and supplies, based on past experience.

15. Additions to Fixed Assets - Per Capital Program to 1991/92 reported by Transport Canada; $15 million per year thereafter. No allowance for a third runway or extensive changes to the existing terminal building.

16. Accounts payable - 65.1 percent of Expenses and Capital Additions.

17. Long-Term Debt - Equal to annual Additions to Fixed Assets

18. Repayment of Long-Term Debt - 30 years term.

19. Employee Termination Benefits - total 5.3 percent of Salaries (current portion 1.9 percent of Salaries).

BASE CASE II

The second base case assumptions are the same as for the first base case except that all the capital expenditures and necessary financings are doubled in every year. The viability of VIA is extremely sensitive to the level of capital expenditures. Base Case II is designed to present the financial results assuming that the capital expenditure forecast provided to Price Waterhouse by Transport Canada was significantly understated.

SPECULATIVE CASE I

The first speculative case builds on Base Case I by introducing the factors that make the Local Authority concept attractive, as follows:

Revenues

1. Plane Movements and Passenger Volumes - Increased by 10 percent of the "base case" annual growth rates from the third to the fifth year inclusive, and 2 percent above the "base case" growth rate thereafter, as a result of marketing initiatives. The reduced incremental growth after the fifth year reflects less impact on increased market share in later years.

2. Terminal Concessions - The value of Terminal Concessions revenue is increased by 2 percent over past experience of revenue per passenger, starting in the third year. This reflects a greater variety of more attractive products offered to the public by terminal concessions.

Operating Expenses

3. Salaries, Wages and Benefits - Cut by 5 percent in the second year and a further 5 percent in the third year, assuming the introduction of staffing efficiencies.

4. Materials and Supplies, Purchased Services, Other Direct Operating Costs and Other Expenses - Cut by 5 percent in the third year, below the "base case" growth, assuming more effective budgetary control.

Balance Sheet

5. Additions to Fixed Assets - Increased by 5 million in each of the second, third and fourth years to allow for commercial/industrial and concessions development required to generate additional revenues.

SPECULATIVE CASE II

The second speculative case further assumes that allowance is made for:

- a third runway at a cost of 75 million (current dollars) over the three years commencing 1997/98 ($25 million per year); and

- major renovations to the existing terminal to improve space usage at a cost of 50 million in the two years commencing 1997/98 ($25 million per year).

RESULTS

The essential criterion of the Airport's "financial viability" is whether it can generate cash in the long term. (Cash generated means cash actually received from revenue sources and debt issues, less cash actually paid out for operating costs, the purchase of fixed assets and debt principal payments). For the purposes of this analysis, "long term" is considered to be the 19 years prescribed in the projections calculated.

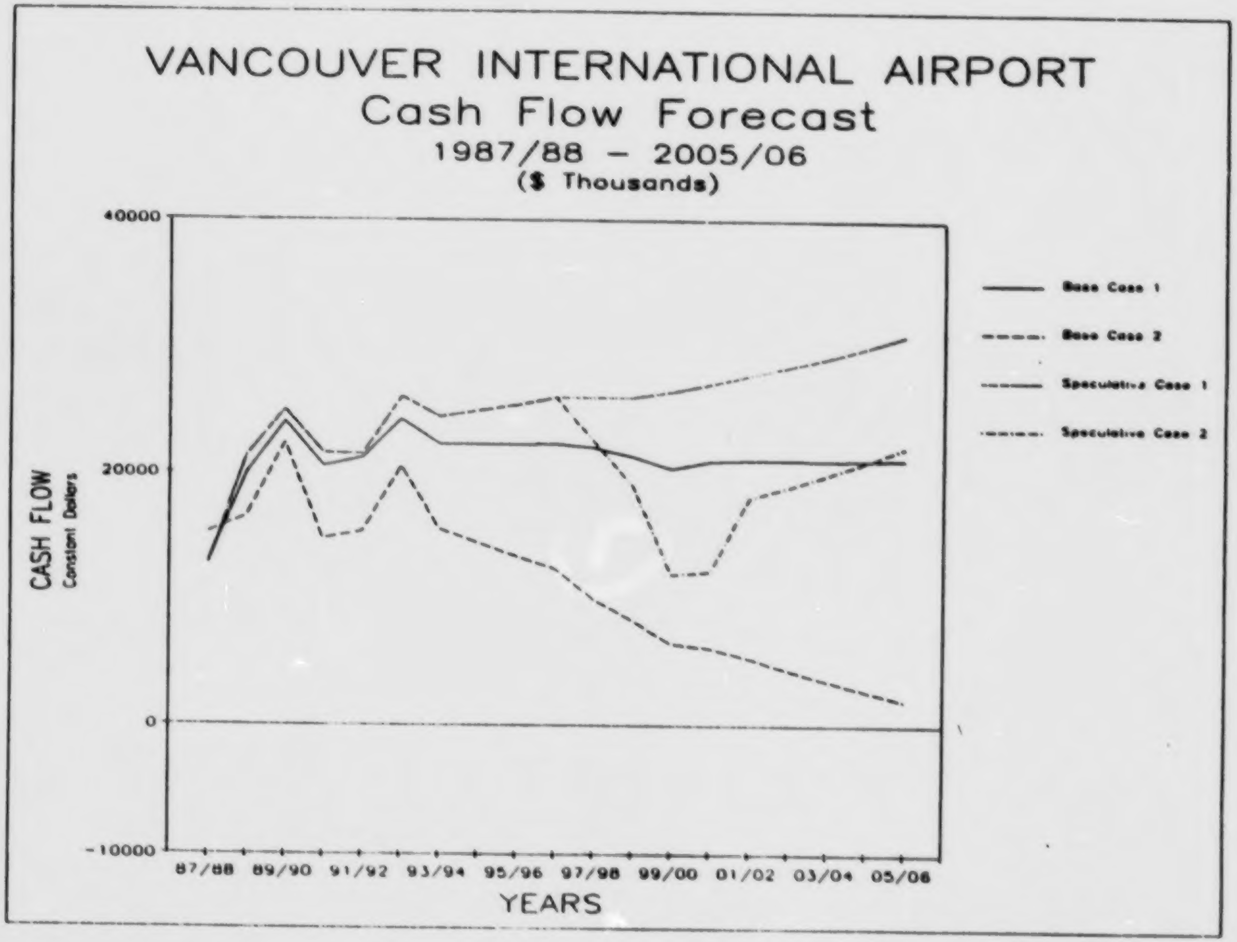
Table 3 immediately following, repeated as Appendix 7-1, presents graphically the level of cash flow generated in each of the four cases described in the preceeding pages.

Appendix 7-2 presents graphically the gross revenue forecasts. Base Case 1 and 2 revenues (which are the same) grow according to Transport Canada's plane and passenger forecasts. Speculative Case 1 and 2 revenues (also the same) include the element of incremental growth assumed to be achievable by a Local Authority.

Appendices 7-3 to 7-6 present the net present value calculations of the cash flow generated in each case. The net present value of the cash flow generated is for this purpose the outlay (purchase price or lease capital value) that will receive the stated percent return on investment (the outlay) from the projected cash flow. Since the cash flows are calculated without allowance for inflation, the rates of return used (3%, 5% and 8%) are intended to represent "real" rates of return (i.e. excluding the need to the recovery of the erosion from inflation of the value of money). If the projections had allowed for inflation, the rates chosen would have been 4% and the rates of return 7%, 9% and 12%.

Appendix 7-7 contains reproductions of the original print outs from the Transport Canada Financial Projection System. There are six pages for each case:

Page 1. Statement of Revenues and Expenses - Calculated according to Generally Accepted Accounting Principles, the statement shows the breakdown of



VANCOUVER INTERNATIONAL AIRPORT
Cash Flow Forecast
1987/88 - 2005/06
($ Thousands)

revenues and expenses, and the resultant net profit for the first ten years of the projection, from 1987/88 to 1996/97.

Page 2. Statement of Cash Flow - the statement shows the sources and uses of cash and the resultant net cash flow for 1987/88 to 1996/97.

Page 3. Financial Ratios and Operating Statistics - the statement shows standard financial ratios, such as Net Profit Margin (Net Profit/Revenue) and Current Ratio (Current Assets/Current Liabilities), and Operating Statistics, including passenger traffic, aircraft movements, operating costs per passenger etc.

Page4-6. As in pages 1 to 3 above, for the nine years from 1997/98 - 2005/6.

BASE CASE I

Without changing the existing revenue and cost structure of the Airport, and with future capital expenditures averaging about $15 million per annum, Base Case I shows a positive income stream, very slowly declining. The decline is so slow, however (see Appendix 7-1), as to be of no consequence for many years. The decline is caused by the gradual increase in servicing the debt issued to pay for the $15 million annual capital program.

Base Case I, therefore, foretells strong financial viability, predicated on the healthy growth is passenger and aircraft volumes forecast by Transport Canada. This forecast calls for approximately a doubling of traffic over the 19 years projected, resulting in the revenue growth presented in Appendix 7-2.

Since the Airport generates and accumulates some $20 million in cash each year from current earnings, and since the expectation is for breakeven, the strength of the financial viability, in this scenario, can be said to be high and more than is required. The Base Case I cash flows are linked in Appendix 7-3 and discounted at 3%, 5% and 8%, resulting in net present values, ranging from $216 million to $310 million.

BASE CASE II

Building on Base Case I, the capital expenditures and the debt issues are doubled in Base Case II. The rationale for developing this case is to demonstrate the sensitivity of the cash flows to the vital operating factors of renewal of equipment, expansion of facilities and introduction of new technologies. The result is a much steeper decline in cash flows (see Appendix 7-1) because of the increased debt servicing burden, such that within about 20 years, the annual cash flows become negative.

Base Case II, therefore shows strong but declining viability over about 20 years, then an inability to operate out of current earnings. This occurs unless other variables are introduced, such as financial assistance in some form (e.g. grants from government, subsidized interest or debt, certain asset additions paid for by the government) related to capital expenditures. Appendix 7-4 shows that the net present values of the Base Case II cash flows range between $137 million and $175 million.

SPECULATIVE CASE I

Speculative Case I demonstrates that relatively small increases in revenues and decreases in operating costs can contain the growth in debt servicing. Appendix 7-1 shows annual cash flows rising slowly through the projection period.

Appendix 7-2 shows the small increase in revenues assumed in this case, compared with Base Case I and II.

The net present values of the cash flows under Speculative Case I are naturally slightly higher than under Base Case I at $241 million to $351 million, as shown in Appendix 7-5.

SPECULATIVE CASE II

Only in Speculative Case II, are the potential needs for a third runway and an expanded terminal recognized. Building on Speculative Case I, a total of $125 million for these two items is provided about half-way through the projection period (see Assumptions).

The result of these purchases is a distinct drop in annual cash flows for a short time, and subsequent recovery, as shown in Appendix 7-1. Under this scenario, negative cash flows do not occur in any year. Based on the assumptions used in Speculative Case II, these major expenditures could be funded out of the cash flows generated in the previous ten years of the projection, thus avoiding an additional debt issue of $125 million.

When the runway and terminal expansions are provided, the net present values drop (compared with Speculative Case I) to a range of $219 million to $310 million, as shown in Appendix 7-6.

While the financial viability study undertaken by Price Waterhouse and Sypher: Meuller was instructive, it must out of necessity be regarded as preliminary. Some essential information required by those undertaking the study, such as acquisition costs, was simply not available. The sensitivity of other information, such as projected passenger growth or the timing of major capital expenditures, were based on Transport Canada's advice and projections without independent verification.

The study was, however, extremely instructive and whether the figures prove accurate or some margin of error must be attributed to them, it has supplemented the other information available to allow the Airport Planning Group to reach the general conclusion that a local authority, properly managed and financed, is financially viable by which we mean it can be self-financed without government support. It's viability, ultimately, is dependent on the transfer arrangements made with the federal government.

CONCLUSIONS

1. VIA is financially viable in the long term, that is, will generate a positive cash flow, as long as capital expenditures are contained, and naturally would become even more viable if measures are taken to increase operating profitability.

2. The key success factors to VIA's financial viability are:

    - reasonable acquisition costs;
    - a fair allocation of revenues, including taxes;
    - development of a business case for every major capital expenditure, demonstrating an acceptable rate of return on the investment;
    - use of debt instruments that have the most favourable terms, and/or negotiate grants or special financing arrangements from the Federal Government
    - certain types of costs, such as those required for security and air traffic control which VIA may be required by federal regulation to install, funded, in whole or in part, by the Federal Government;

- increases in revenues by various entrepreneurial measures; and

- decreases in operating costs by introducing private sector standards of control.

3. The financial viability of VIA depends, ultimately, on the transfer arrangements concluded with the federal government.

CHAPTER 8: A PLAN OF ACTION

As summarized in the concluding sections of each chapter, we believe a compelling case has been made for taking the initiative to establish a local authority and arrange for an orderly transfer of management of the Vancouver International Airport from Transport Canada to such an authority. Given the current policy of Transport Canada (see Appendix 1-3) it seems opportune to begin such discussions at an early date.

There is a new, competitive air transport environment and VIA must respond to the challenge. A timid response which only tinkers with the system or a long delay in implementing fundamental change could have serious consequences. The status quo will result in a loss of market share that will be very difficult to retrieve. To grow with the new opportunities created by the fundamental shifts in the air transport industry demands that VIA adopt a more competitive, market- and customer-oriented strategy. The Pacific Rim freight and passenger air transportation markets are among the fastest growing in the world. The overriding objective must be to have the Vancouver International Airport recognized as a truly world class airport. To do so it must position itself, not only as Canada's gateway to the Pacific Rim, but as an important in-transit link between the Orient and Europe, South America and points in North America and as a desirable destination in itself. A local authority is the best management system to achieve these objectives.

The basic goals of a local authority management system include:

- Better community control and more responsiveness to local concerns. Marketing, in particular, could be more easily integrated into local programs.

- More innovative management and flexibility: not being bound by national policies and the national bureaucracy.

- Mandate of the airport could include broader economic development and community goals.

- Potentially improved access to capital for expansion since expansion can be based on economic concerns and financial performance, not political policies of restraint or redistribution.

- Development of more on site commercial enterprises such as duty-free shop expansion and entertainment facilities and a general increase of non-aviation use of the airport land. Potential for the community to utilize the airport.

- Capital expansion could be based on more long range planning. A shift to accrual accounting would allow more projects to have a longer, more viable term as assets would not have to be depreciated in a single year.

Recommendation Number 1.

A Vancouver International Airport Authority be created by enabling legislation.

Recommendation Number 2.

The VIA be a local public authority with powers to assume management and ownership of VIA. The authority would be:

- **a publicly owned corporation;**
- **locally based and controlled;**
- **able to collect revenues and make expenditures on its own authority;**

- **self-financing, with authority to access private capital markets;**
- **representative of users as well as the local community and business interests;**
- **structured to be able to reach decisions efficiently;**
- **operated in a responsible and business-like manner, while recognizing the needs of the community as a whole.**

Recommendation Number 3

The VIA Authority adopt a market- and customer-oriented approach and implement an effective marketing program. This means not only analyzing the opportunities created by the changing air transport environment and creating a distinctive market niche, but also responding creatively and quickly and implementing decisions without delay.

Recognizing its great impact on the provincial economy, VIA must be operated as a powerful tool for regional economic development. Specifically, VIA's new management structure must have the following characteristics:

- be able to identify and respond quickly to commercial as well as industrial development opportunities;

- be financially accountable with a fee structure which will help promote the growth of traffic beneficial not only to the airport but to the region as a whole;

- be able to improve and strengthen linkages with other B.C. industries like tourism and high technology manufacturing;

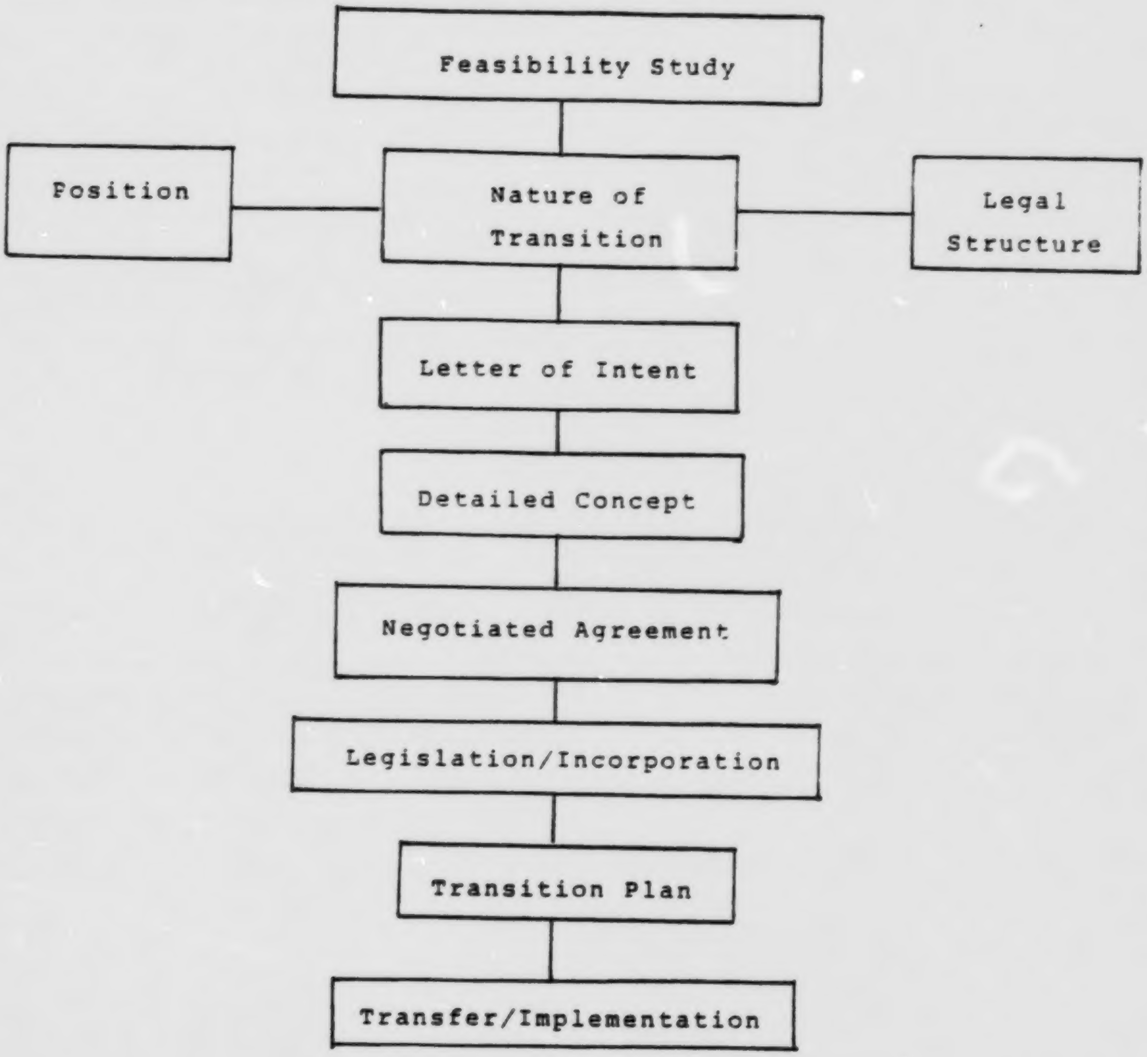
- allow VIA to capitalize on all opportunities which could benefit the region from an economic development standpoint, including Foreign Trade Zones.

Recommendation Number 4

The legislated mandate of the VIA Authority be broad enough to include economic development as well as transportation related undertakings.

The Process

The table immediately below illustrates one approach towards the establishment of an airport authority.


Feasibility Study
Position
Nature of Transition
Legal Structure
Letter of Intent
Detailed Concept
Negotiated Agreement
Legislation/Incorporation
Transition Plan
Transfer/Implementation

This process is currently underway in Vancouver. It involves:

- Identifying a sponsoring group or "champion" to spearhead the analysis. In Vancouver's case this is the Airport Planning Group or its successor.

- Determining if widely based community support exists, including support from municipal governments.

- Analyzing financial feasibility and economic development potential.

- Preliminary organizational design.

This report of the Airport Planning Group satisfies the requirements of a preliminary feasibility study. Further steps in the process are briefly discussed below.

Position

The result of this decision process will be to define a community position, principally.

- A statement of principles and all critical points for discussion with Transport Canada.

- An understanding of the general nature of the authority including board qualifications and nominations.

Nature of Transition

Transport Canada has provided interested community groups with its concept of how the transition will be handled and ideas on the duration of the process. Vancouver needs to establish its own agenda and timetable, and to come to agreement with the federal government on how the transition will take place. One workable concept includes agreement in advance that:

- a letter of intent covering broad concepts will be agreed upon and signed by both parties early in the process to avoid wasted time and energy.

- a reasonable timeframe will be adhered to.

Political level involvement may be desirable and necessary at certain points in the process.

Legal Structure

A specific legal structure which will meet all the criteria defined for the authority needs to be developed in the context of British Columbia law. Questions such as the degree of independence from municipal control, taxing or revenue generating powers, political accountability and so on will have to be addressed. Precedents in B.C. for federal, provincial and municipal corporate entities need to be reviewed and an optimum legal framework proposed.

Two broad paths appear to be open for establishment of an authority: enabling legislation or incorporation as a corporation with a combination of municipal, provincial and federal shareholdings on the German model. Of the two approaches, enabling legislation appears to be the most feasible and desirable.

Because an airport authority is a distinct public corporate body, it will require legislation to bring it into existence. The purpose of the enabling act is to create an authority with power to own, operate and develop an airport or airports and arrange for an orderly transfer of airport properties, goods, personnel, debts and responsibilities from the federal government to the authority.

Although each enabling act is unique, an act for Vancouver would likely include the following significant clauses:

- A description of the purpose for which the authority is created, its powers and the functions it is permitted to perform which typically include the responsibilities:

    a. to plan, establish, acquire, construct, improve and operate;
    b. to enter into user agreements;
    c. to issue bonds or other debt instruments;
    d. to provide policing and crash rescue services;
    e. to recommend zoning changes to municipal authorities to protect the airport.

- A definition of the composition, qualifications, and compensation of the Board of Directors.

- A minimum requirement for frequency of Board meetings.

- A description of the roles and qualifications of the executives of the airport

- A requirement that the authority enter into a contractual arrangement with the federal government for the transfer of properties, function, responsibilities, goods, and personnel.

- An obligation that the authority ensure that annual revenues are sufficient to meet all expenses (operating and debt servicing) and to establish reserves.

- A proviso that Board members are not personally liable when they act in good faith.

- Provision for the authority to issue regulations and by-laws for the airports.

- provide for a stand-alone authority without linkages to any specific municipality.

- protect involved governments from any liabilities

- clearly identify facilities to be operated (other regional airports).

Letter of Intent

It is in everyones interest to have major issues of principle dealt with before substantial resources are devoted to questions of detail. This is particularly true because some of the key issues will likely require political involvement. The procedure proposed is the negotiation and signing of a letter of intent or memorandum of understanding. The time frame and approach would be agreed to in advance and the document would include:

- a statement of common goals and objectives

- the principles for initial acquisition of the airport by the authority and evaluation of assets.

- composition of the local authority board and legislated mandate

- time frame for completion of a final agreement.

Detailed Concept

Following agreement in principle and the signing of the letter of intent, a complete and detailed concept for the authority would be prepared including organization, staffing, staff transition, financing financial management and enabling legislation. This detailed package would be the basis for the final agreement.

Negotiated Agreement

The approach defined by Transport Canada is that each airport transfer will be on a "one-of" basis though a list of common prerequisites have been identified (See Appendix 1-3). Some of these will be resolved as part of the letter of intent. Others will likely be the subject of further discussion. It will also be necessary to resolve the issues of transfer of land(sale or long term lease), future major capital needs, cost sharing for federally directed capital expenditures, relationships with other federal departments, and residual federal controls and involvement.

To be successful, the parties will require a clear mandate. Provincial, municipal and community support for the initiative will be beneficial, as the ultimate decisions will likely be made at the political level.

Transition

The transition plan will include a detailed workplan, budget and critical path analysis for the transition from federal operation. The total timeframe included in the plan is likely to be 12-18 months. The plan will address:

- transition of staff and staff benefits
- development if integrated accounting and management information systems
- hand over of assets including inventory

Transfer/Implementation

The final step in the authority process is the actual transfer to authority status and the implementation of all systems to support the new entity. If the transition plan is well done, the actual transfer will be smooth.

Policy Considerations

It is essential that the process of "defederalization" of the Vancouver airport be viewed in the context of a national policy. At present Vancouver, Edmonton, Calgary and Montreal are actively examining a local authority for their airports. Much could be gained if the federal government agreed to pursue discussions with the four airports as each indicates it is ready to proceed. A sequential procedure is not only wasteful but unfair, since principles established in early negotiations may be imposed on subsequent applicants and, given the rapid changes in air transport policy, a long delay may result in negative impacts as authorities wait perhaps years for their turn.

While clearly some fundamental principles must be resolved and a satisfactory financial package concluded, the change to a local authority need not be adversarial, and should not be characterized as a negotiation, at least not at the initial stages. First, such a transfer of management authority is consistent with stated federal transportation policy. Second, the airports are being transferred from one public body (Transport Canada) to another public body (a local authority). This is not a "privatization" as was the case in the U.K., rather a devolution from a central agency to a local public corporation. Finally, and perhaps most importantly, we are satisfied that such a change will make VIA a stronger, better airport not only capable of generating beneficial economic development, but playing a positive role in improving Canada's transportation system as a whole, and that, surely, is to everyone's benefit. This is a mutual effort at creating the best management structure.

The objective of this process is to create a management structure that can best make the decisions that will determine the future of VIA. The Airport Planning Group did not consider such questions as whether a further runway is required at VIA and, if so when. Nor did it inventory or evaluate the airport's assets or undertake an operational study to determine which regional airports, if any, should be included in the VIA management system. These important issues, and many others, are the responsibility of the local authority once it is created and can begin the very serious job of exploring the options and, based on its assessment, put forward proposals. It was not the mandate of the Airport Planning Group to plan anything; rather to advise on the management system that can best plan the future of VIA. We are convinced that whatever decisions follow, they will be based on sound planning principles and responsive to community interests. A locally based authority with a mandate to efficiently manage existing resources, free from direct political influence and obliged to serve the needs of the local community will, we hope, begin the process of consensus building needed to secure the airports future.

The time to act is now. We are satisfied the process described for the transfer of management to a local authority is sound and should be adopted by the community interests and governments involved.

Recommendation Number 5

The Asia Pacific Initiative Advisory Committee work with the governments involved to establish the process and timetable for the transfer of management to a local authority.

. The need to take action is clear. The time to take action is now. All that remains is for people of vision to launch the process that will not only change the management system at the VIA, but change the role the airport plays in our community and make it, truly, a international gateway and world class airport.

THE ASIA PACIFIC INITIATIVE

On December 16, 1986, federal and provincial ministers signed a Memorandum of Understanding (M.O.U.) calling for the coordination of initiatives to enhance British Columbia and Vancouver as Canada's Pacific Centre for trade, commerce and travel. The M.O.U. was later designated as the Asia Pacific Initiative.

On June 2, 1987, the Asia Pacific Initiative Advisory Committee (APIAC) – drawn from the private sector – was established to advise federal and provincial ministers of initiatives that might be undertaken to achieve the objectives of the M.O.U. This advice is transmitted by the APIAC to the federal-provincial Pacific Council of Ministers through a Ministerial Executive Committee that meets regularly with the APIAC.

The APIAC has appointed task forces that are addressing opportunities and advising the Governments of Canada and British Columbia in the areas of international finance, trade, transportation, tourism, cultural and social impact and the export of professional services. More than 100 volunteers from the private sector are engaged in this work.

ASIA PACIFIC INITIATIVE

ASIA PACIFIC INITIATIVE

P.O. Box 32, 770 Pacific Blvd. South, Third Floor, Vancouver, B.C., Canada V6B 5E6

VANCOUVER INTERNATIONAL AIRPORT
PLANNING GROUP

APPENDICES

NOVEMBER 1987

The Vancouver International Airport Planning Group
A Committee of the
ASIA PACIFIC INITIATIVE
Produced this Report on the
Goals, Ownership and Management Options
For the
Vancouver International Airport

MEMORANDUM OF UNDERSTANDING

BETWEEN: THE GOVERNMENT OF CANADA (represented herein by the Federal Minister of Regional Industrial Expansion) and hereinafter referred to as "Canada".

OF THE FIRST PART

AND: THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA (represented herein by the Provincial Minister of Economic Development) and hereinafter referred to as "British Columbia".

OF THE SECOND PART

WHEREAS: The Course of Action dated February 21, 1986, pursuant to the Canada/British Columbia Economic and Regional Development Agreement set out as one of the priority areas for discussion, the development of British Columbia as a Pacific centre for trade, commerce and travel.

BACKGROUND:

1. The economy of British Columbia is highly export oriented. The export of resource based goods has long been the mainstay of the British Columbia economy. With evolution and diversification of the economy the services related to trade and travel are becoming increasingly important.

2. The strongest and fastest growing trade links are with the Pacific Rim trading partners.

3. British Columbia, including Vancouver as a key hub, is the principal Canadian gateway to the Pacific.

4. Many institutions have in recent years been established in British Columbia in support of Asian Pacific trade. These include centres for Asian studies at British Columbia's universities, and the Asia Pacific Foundation of Canada.

5. Services, such as financial, legal and other business services, are important in the facilitation of trade.

6. A number of new initiatives are in train by both governments. These include joint federal/provincial efforts to establish an international banking centre in Vancouver, and British Columbia's establishment of an international commercial arbitration centre.

7. Additional new opportunities have been identified in the areas of:

   (a) business and financial services

   (b) transportation services, both in support of trade and travel and as an economic catalyst

   (c) direct export of services

   (d) travel and tourism.

8. The success of EXPO 86 has given Vancouver, and the rest of British Columbia, a new favourable profile and visibility internationally.

9. New facilities and infrastructure (both private and public) in hotels, urban transit, convention facilities, airport improvements, highways and bridges have recently been put in place.

10. The estalishment in 1985 of the World Trade Centre in Vancouver provides an important focal point for the concept of British Columbia as a Pacific centre for trade, commerce and travel.

THEREFORE:

The two governments agree that coordination of efforts is desirable to strengthen and reinforce the natural evolution of British Columbia as a Pacific centre for trade, commerce and travel.

OBJECTIVE:

It is the objective of this Memorandum of Understanding to provide a mechanism for the two governments to:

(a) identify areas of opportunity where the governments may act in concert to strengthen the economy through building the concept of a Pacific centre

(b) manage a set of initiatives, involving both current and new elements within the broader context of the goals of the Pacific centre concept

(c) consult and coordinate with the private sector, municipalities, trade and labour associations, and other institutions in order to achieve synergy among the diverse elements that the Pacific centre concept embraces.

AMENDMENTS:

Amendments may be made at any time subject to concurrence of the two Ministers.

This Agreement is signed on this 16th day of December, 1986.

IN THE PRESENCE OF:

GOVERNMENT OF CANADA

Witness

Minister for Regional
Industrial Expansion

PROVINCE OF BRITISH COLUMBIA

Witness

Minister of Economic
Development

Schedule "A"

Representative Issues to be Addressed By Management Committee

1. Financial, Legal and Other Business Services

As British Columbia develops as a centre for trade, commerce and travel, an opportunity will open for considerable expansion of services that support the needs of business. The Province of British Columbia and the Federal Government have already indicated their desire to facilitate the growth of international banking in Vancouver. This is consistent with the development of other international financial services in British Columbia. A variety of other services currently available to the international business community have potential for extension and enhancement. These include commercial arbitration services, expertise in Pacific Rim commercial law and methods for streamlining filing procedures for the Vancouver Stock Exchange consistent with other international stock exchanges.

2. Transportation Services

The ports and airports, as well as the connecting transportation services in British Columbia are vital supporting components in Pacific trade, commerce and travel. These elements are also important catalysts for related economic activity, and significant employment generators. There may be opportunities that the two governments and the private sector can consider in cooperation to help facilitate transportation improvements and stimulate new economic activities related to transportation. For example, there may be substantial opportunities to attract additional traffic and new activities to the Vancouver International airport complex. Similarly, there may be possibilities for stimulating various commercial and industrial activities connected with the west coast ports and airports. The two governments may also examine services related to transportation (for example, brokering, freight forwarding, insurance, chartering) and the ways and means these services might be enhanced to help create a climate for growth in these areas.

3. Institutions to Facilitate Trade

There already exist a number of important public and private sector institutions that provide a supporting base for Pacific trade, commerce and travel. These include the Asia Pacific Foundation of Canada, the Vancouver World Trade Centre, and the Asia Pacific Business Institute. In addition, opportunities exist for universities and other educational institutions in British Columbia to develop further as key centres for intelligence, data, analysis and advice on Pacific Rim matters in support of the business community. There are also possibilities for improving the scope of trade promotion by better coordination among federal, provincial and municipal agencies, and by extending the range of services available to British Columbia business.

4. Export of Services

Opportunities have been identified for enhancing trade through the export of a number of professional and technical services in which a significant expertise has evolved in British Columbia. Services can be exported by sending personnel abroad, or by attracting overseas clients to purchase services in the province. Services available in British Columbia which have export potential include resource-based engineering, resource management consulting, information services, post-secondary education services, architectural services, telecommunications and some health care services.

5. Tourism and Travel Industry

British Columbia has developed an international reputation as an important tourist destination. EXPO 86 provided a substantial boost to the tourism industry in the province. In order to build on this momentum an array of tourism and travel initiatives are being explored. Proposals include improved coordination of public and private sector marketing and promotion of tourist destinations and convention facilities and enhancement of infrastructure supporting these facilities. There is also potential to develop or enhance specific products and services such as the Alaska cruise-ship business, locally based "pocket" cruises, and cultural tourism. Initiatives contemplated in transportation and business services will also strengthen and enhance tourism.

BACKGROUNDER

To the Memorandum of Understanding on British Columbia as a Pacific Centre for Trade, Commerce and Travel

FEDERAL AND PROVINCIAL INITIATIVES

- A Canada/British Columbia Economic and Regional Development Agreement (ERDA) was signed on November 23, 1984. Subagreements signed in 1985 committed the federal and provincial governments to expenditures of $596.8 million over a 5 year period from 1985 to 1990.

- On February 21, 1986 federal and provincial ministers responsible for economic development signed a Course of Action under the ERDA agreeing that a priority initiative would be to pursue the concept of designating Vancouver as a Centre for Pacific Rim Commerce.

- In February of 1986 the Honourable Michael Wilson, in his Budget Speech, committed the federal government to the establishment of an international banking centre in Vancouver.

- On September 29, 1986 the provincial government announced its intentions to pursue a 'New Economy', a cornerstone of which is the concept of British Columbia as a Pacific Centre for Trade, Commerce and Travel.

PACIFIC RIM TRADE ENVIRONMENT

- The Canadian economy, and in particular British Columbia, is trade dependent.

- Pacific Rim countries are our fastest emerging trading partners. Exports to Asia Pacific countries have exceeded those to European countries since 1982.

- Canadian exports to the Asia Pacific region were valued at $10 billion in 1985. Of this, $4 billion or 40% was generated by British Columbia. This compares with exports to Europe of $8 billion and $1.3 billion from Canada and British Columbia respectively.

VANCOUVER AS AN INTERNATIONAL FINANCIAL CENTRE

- There are currently 33 foreign banks operating in British Columbia. Vancouver is headquarters for the Hongkong Bank of Canada, which recently acquired the Bank of British Columbia.

- Vancouver is home to the second largest Credit Union in North America, VanCity Savings.

- The Vancouver Stock Exchange is the 2nd largest in Canada in terms of share volume, handling nearly 3 billion shares at an estimated value of $2.7 billion in 1985.

- The Vancouver Board of Trade recently opened the World Trade Centre, which is linked with trade centres globally through the World Trade Centre Association.

- Vancouver is headquarters to 35 of the top companies in Canada.

- The federal and provincial governments jointly sponsored the establishment of an International Commercial Arbitration Centre in Vancouver. There are 7 such centres in the world. The only other North American centre is in New York.

TRANSPORTATION SERVICES

- British Columbia and Vancouver are transportation gateways to the Pacific Rim.

- The provincial government has made significant investments in transportation facilities and services over the past five years. Those facilities, including the SkyTrain, the Alex Fraser bridge and the Coquihalla Highway will help to enhance British Columbia's role as Canada's Pacific gateway.

- Ports in the Lower Mainland and at Prince Rupert are major transhipment points for goods and materials exported to the Pacific Rim.

- The federal government and its port corporation have made significant investments in new port facilities over the past few years. The Vancouver Port Corporation has expanded the Roberts Bank deep sea port and has also enhanced its container handling facilities. The Port of Prince Rupert has developed world class grain and coal terminal facilities on Ridley Island.

- The Port of Vancouver is the largest port in Canada (by tonnage) and the second largest on the West Coast of North

- The Port of Vancouver handled 56 million tonnes in 1985. Exports accounted for 46 million tonnes, of which 62% was destined for Asia Pacific countries.
- The Port of Vancouver provides direct and indirect employment for over 57,000 workers.
- The Fraser River Port provides direct and indirect employment for approximately 25,000 people.
- The Vancouver International Airport is the 2nd busiest in Canada, handling 8.5 million passengers in 1986.
- The Vancouver International Airport serves 21 major carriers servicing over 250 destinations in 40 countries.
- The airport generates approximately $1.5 billion in gross revenues annually and provides 11,500 person-years of employment. Annual payroll is in excess of $350 million.
- Canada's two national railways have spent well over $1 billion in recent years upgrading railway lines to the ports of Vancouver and Prince Rupert.
- B.C. Rail has also invested over $500 million in recent years on mainline upgrading and new extensions in order to service resource and manufacturing industries in British Columbia.
- These investments will ensure that British Columbia's and Western Canada's export industries will continue to be served by the most modern and efficient railway facilities in the world.

INSTITUTIONS TO FACILITATE TRADE

- The federal government, in association with provincial governments and the private sector, established the Asia Pacific Foundation in 1985 to 'build bridges' between Canadian business people, educators and government officials involved in Asia Pacific affairs. The federal government will have provided $15 million to this institution during its first five years of operation.

- The Asia Pacific Business Institute was established in 1985 under the auspices of the three British Columbia universities. Funding of $600,000 was provided by the Secretary of State.
- The Canadian International Development Agency (CIDA) has recently provided $15.4 million for the establishment of major programs on Indonesia at Simon Fraser University and the University of British Columbia.
- In addition, CIDA has awarded over $52 million in overseas engineering and management consulting contracts to firms in British Columbia over the last two years.

EXPORT OF SERVICES

- British Columbia has significant engineering, financial, legal, medical and educational expertise and services that can and are being marketed in the Asia Pacific region.
- There are over 700 engineering firms located in Vancouver, many with international reputations.
- There are 3 public universities in British Columbia with over 50,000 students as well as an extensive community college network serving an additional 70,000. Approximately 10,000 students are visitors from foreign countries, of which 2,000 are at the university level and half of these are from Asia.
- Vancouver has an internationally known meson facility, TRIUMF, that serves the medical and scientific community.

TRAVEL AND TOURISM INDUSTRY

- Tourism is becoming one of British Columbia's premier industries, contributing some $2.9 billion to the economy in 1986.
- EXPO 86, with attendance exceeding 22 million, attracted an estimated 6 million visitors to British Columbia in 1986.
- The federal government contributed $263 million to EXPO in the form of Canada Place (now the British Columbia Trade and Convention Centre), the Canada Pavilion, the Business Opportunities Centre and other federal on and off site services.

- The provincial government contributed over $350 million to Expo by funding the EXPO 86 Corporation and building the B.C. Place Pavillion. This expenditure, together with the expenditures by the federal government, generated over $500 million in private sector capital spending and over $500 million in additional tourism revenues during 1986.
- The cruise ship industry is growing. In 1986 Vancouver provided berthing for 240 cruise ships carrying 350,000 passengers.
- In 1986 Vancouver hosted over 250,000 convention delegates who contributed over $150 million to the local economy.
- Vancouver now has in excess of 12,758 hotel rooms including several world class hotel groups.

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ASIA PACIFIC INITIATIVE ADVISORY COMMITTEE

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*Observers.
Alphabetical order.

Appendix 1.3

TP835 [illegible]

Transport Canada
Airports Authority Group

Transports Canada
Groupe de gestion des aeroports

A new policy

A FUTURE FRAMEWORK FOR THE MANAGEMENT OF AIRPORTS IN CANADA

Canada

1. GENERAL

The new policy regarding a future management framework for airports is comprised of two parallel, yet distinct thrusts:

a) discussions regarding airport ownership or operation by others, where there is a reciprocal interest, and

b) a new approach toward managing airports retained by Transport Canada that emphasizes their commercial orientation, potential contribution to economic development and responsiveness to local interests and concerns.

2. OWNERSHIP AND OPERATION OF AIRPORTS BY OTHERS

The Minister of Transport is prepared to receive proposals for transfer of ownership and/or operation of federal airports by other interested bodies. Transport Canada would continue to be responsible for ensuring a safe and efficient airport system, but this role may be exercised through regulation and financial support, not necessarily ownership and operation. The Federal Government's mandate with respect to safety and security, including air navigation services, air traffic control, and airport certification will remain unchanged.

In the long term, the transfer of ownership and/or operation is possible in order to provide for increased responsiveness to local commercial and economic initiatives and to reduce the involvement of the Federal Government in airport management. The exact form of organization accepting a transfer could vary to suit local circumstances and interests. Options in this regard would include provinces, municipalities, local Authorities or Commissions authorized by federal or provincial legislation. In addition, private sector leasing would be considered.

As there will be no pressure on the part of the Federal Government, any potential transfer of ownership and/or operation will require substantial interest and initiative on the part of potential eligible bodies to assume responsibility as well as obtain appropriate provincial agreement.

Where local interest is expressed, the Minister of Transport will consider the transfer of ownership or operation of those airports with interested parties, within the following guiding principles:

A. Federal Funding Requirements

The government would not expect its funding requirements to increase in the long term. Although there might be incremental start-up costs or initial capital expenditures required as part of the divestiture package, the government would expect to recover such costs within a reasonable period, perhaps ten years.

B. **Fair Commercial Value**

The federal government would expect to obtain reasonable compensation for any facility transferred whether by outright sale or by long-term lease. In the case of sale, compensation in the form of a lump sum payment or in annual installments, should consider historical investments as well as future earning potential. In the case of a lease, value would be received in the form of rental payment.

C. **Employee Transfer**

The federal government would want to negotiate an equitable package for the transfer of its employees. The package would include pay, pensions, benefits, continuity of service and other terms and conditions of employment to be negotiated with any new authority.

D. **Airport Operation**

The receiving authority would be expected to operate the airport (or airports) under the terms and conditions of the operating certificate and according to the safety and security regulations prescribed for the type of aircraft activity at the facility. The terms and conditions of the transfer would require conformity with the philosophy of the economic regulatory reforms embodied in the National Transportation Act. All air carriers, new as well as existing ones, would be allowed to compete openly and freely and to receive equitable treatment in obtaining access to airport facilities and services. The new operator would also be expected to respect Canada's international obligations and agreements with other countries and agreements with other Transport Canada components, other federal government departments, provinces or municipalities as may be in the national interest.

E. **Existing Leases and Licences**

The receiving agency will be required to honour the leases, licences, and commercial contracts which are in existence at the time of transfer.

F. **Existing Federal Initiatives**

Special federal programs and initiatives, e.g., Official Languages, Transportation of the Disabled, will continue to apply.

G. **Future Financial Arrangements**

The receiving agency would have to be made aware that all revenues from federal taxation including the Air Transportation Tax will be retained by the federal government. However, in the case of nonprofitable airports, the federal government would be prepared, on a case-by-case basis, to negotiate cost-sharing agreements with incentives and/or sunset clauses.

H. Competition

Any new owner or operator would be subject to the federal Competition Act. Due consideration would also be given to the economic regulatory measures or processes of the particular province where the airport(s) is located.

Where agreement can be reached on the terms and conditions of transfer, the necessary federal government approvals will be sought on a case-by-case basis.

3. CONTINUING OPERATION OF AIRPORTS BY TRANSPORT CANADA

A new approach to airport management named the Transport Canada Airports Authority Model has been developed to enhance the potential of all airports for transfer as well as to serve as an improved form of management for those airports not transferred. Objectives to be achieved would be:

a) to manage the existing airport system in a consistent, safe, secure and business-like manner, and to recover the costs of the system;

b) to operate individual airports in the most efficient, effective and safe manner;

c) to maximize airport revenue generation opportunities from commercial development, and to involve the private sector in such opportunities; the purpose being to narrow the gap between revenues and expenditures in the long term;

d) to support the economic development objectives of the government as outlined in the National Transportation Act as well as those of provincial and municipal governments.

To achieve these objectives, attention will be given to areas such as:

1) **Commercial Development**

Plans have been developed for all of the Transport Canada owned and operated airports. Implementation of these plans can generate a significant increase in revenues.

2) **Increased Local Involvement**

In order to demonstrate more sensitivity to local interests and concerns, it is the intention to establish a local Airport Advisory Board comprised of business persons at each major airport. As advisors to the airport manager, the Board would bring business acumen to airport affairs, would enhance the focus of the airport as a business entity and would foster a community appreciation of the economic impact of the airport.

The Board would review the annual business plan and all other plans for future development, as well as identify and assist in developing promotional opportunities for the site. Board members would be given the opportunity to participate in major initiatives and project evaluations. Advisory Board chairpersons would comprise a National Board, meeting with the Executive Director, Airports Authority Group, annually.

The existing Airport Consultative Committees at major airports, now made up of municipal leaders and organized interest groups would continue as the traditional forum for information exchange and coordination with the community. At smaller sites there would be a renewed emphasis on the consultative process with such features as an annual meeting, on a regional basis, of Committee chairpersons or representatives.

3) Opportunities for Private Sector Involvement

Almost all commercial activities on airports are carried out by the private sector. Transport Canada will continue to act as a catalyst to enhance these opportunities through cooperative marketing efforts as well as with other levels of government.

In addition, all avenues for private sector investment in traditional and non-traditional airport services would be continually explored and fostered to the maximum extent possible. The Airport Advisory Boards, discussed previously would be expected to assist in identifying, exploring and promoting new initiatives.

4. IMPLEMENTATION

Proposals received by Transport Canada will be reviewed and interested parties will be provided with more detailed information on how to proceed. Departmental officials will be available to provide briefings as necessary, prior to entering into more detailed discussions.

April 8, 1987

Appendix 1-4

Terms of Reference

Vancouver International Airport
Planning Group
Terms of Reference

1. Objectives

The Vancouver International Airport Planning Group will be established by the Asia Pacific Centre Advisory Committee in response to the Federal Government's recently announced airport devolution process. The Planning Group's objectives will be to:

a) Identify operational and planning goals for Vancouver International Airport consistent with its position as a gateway between North America and the Asia Pacific region and as vital component of the British Columbia economy.

b) Identify the benefits and costs of pursuing these goals by instituting a new management structure at Vancouver International Airport involving provincial, regional, or local authorities.

c) Recommend ownership and management structure options appropriate for realizing the potential of Vancouver International Airport.

d) Outline the future actions required to implement the ownership and management structure options identified for Vancouver International Airport.

2. Scope of Work

In fulfilling its objectives, the Planning Group will identify economic development opportunities and undertake studies of financial, legal, and organizational issues related to management of Vancouver International Airport. The specific terms of reference for these studies will be developed by the Planning Group in conjunction with the Asia Pacific Centre Advisory Committee and the Pacific Centre Management Committee. These terms of reference will include, but not be restricted, to the following topics:

a. Airport Objectives

- Principles of airport operation
- Management goals
- Airport traffic growth potential
- Potential commercial activities at airport
- Economic development opportunities flowing from Vancouver International Airport

b. Financial Feasibility of Options

- Operating revenues
- Supplemental revenues (including airport ticket tax)
- Operating and maintenance costs
- Future capital requirements/sources of funds
- Financial performance and structure
- Identification of other keys issues

c. Legal/Regulatory Implications

- Application of existing federal, provincial and municipal legislation
- Required legislation/amendments/agreements
- Legal agreements with other parties
- Air bilateral negotiations
- Environmental concerns and approvals

d. Ownership and Management Structures

3. Reporting Relationship

The Planning Group will report to the Asia Pacific Centre Advisory Committee's Sub Committee on Airports and will liaise with the Advisory Committee with respect to airport-related work undertaken as part of the Asia Pacific Centre initiatives.

4. Membership

The Planning Group will be chaired by a member of the Asia Pacific Centre Advisory Committee and will include other appointments as required. The Planning Group will engage specialist consultants as required to fulfill its mandate.

Appendix 1.5

Organization and Investigation Staff

- Project Manager: Russ Anthony

Mr. Anthony has been a lawyer for seventeen years including serving as Vice-President Law and General Counsel of EXPO 86. He has been project manager of major development projects.

- Researcher: David Dale

Mr. Dale is a management consultant and pricipal in his own firm. He served as a member of the Task Force on the Future and Management of Canadian Airports and Air Transport Policy Advisor to Honourable Don Mazankowski during his term as Minister of Transport.

- Secretarial/Production: Lorraine Vinish

Consultants employed:
Mr. Michael Tretheway, Faculty of Commerce, U.B.C.
Price Waterhouse
Bruce Rozenhart of Robertsen and Rozenhart
Robert Brennan, Masters Candidate, School of Planning U.B.C.

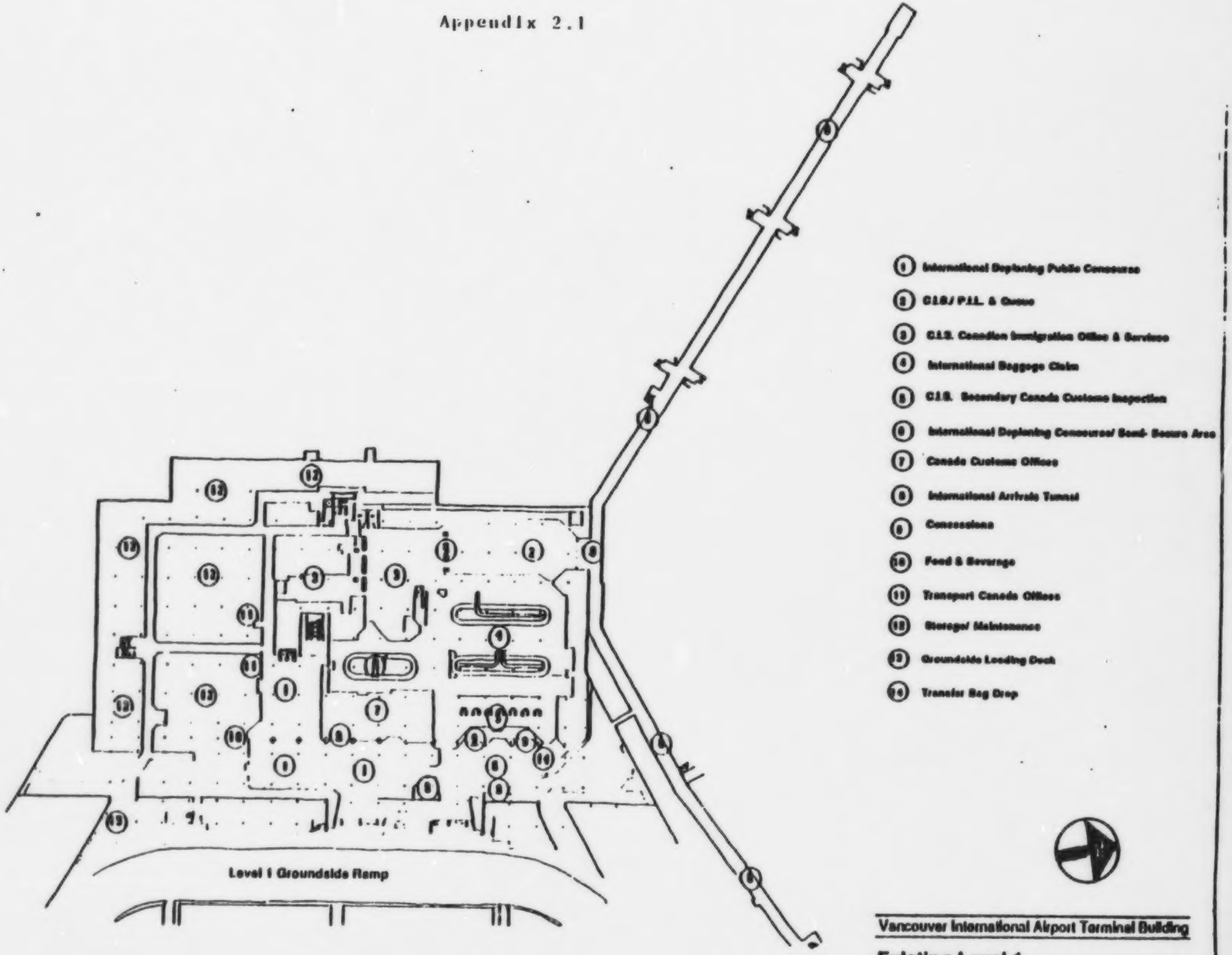
Bruce Rozaenhart provided a benchmark overview of the existing issues at the Vancouver International Airport.

Robert Brennan did a study on Land Use and regional economic development opportunities.

Dr. Tretheway was employed to do two studies one outlining the existing macro-policy framework impacting on the Vancouver International Airport and a logistical study analying passenger and cargo trends and the opportunities and challenges for Vancouver International Airport.

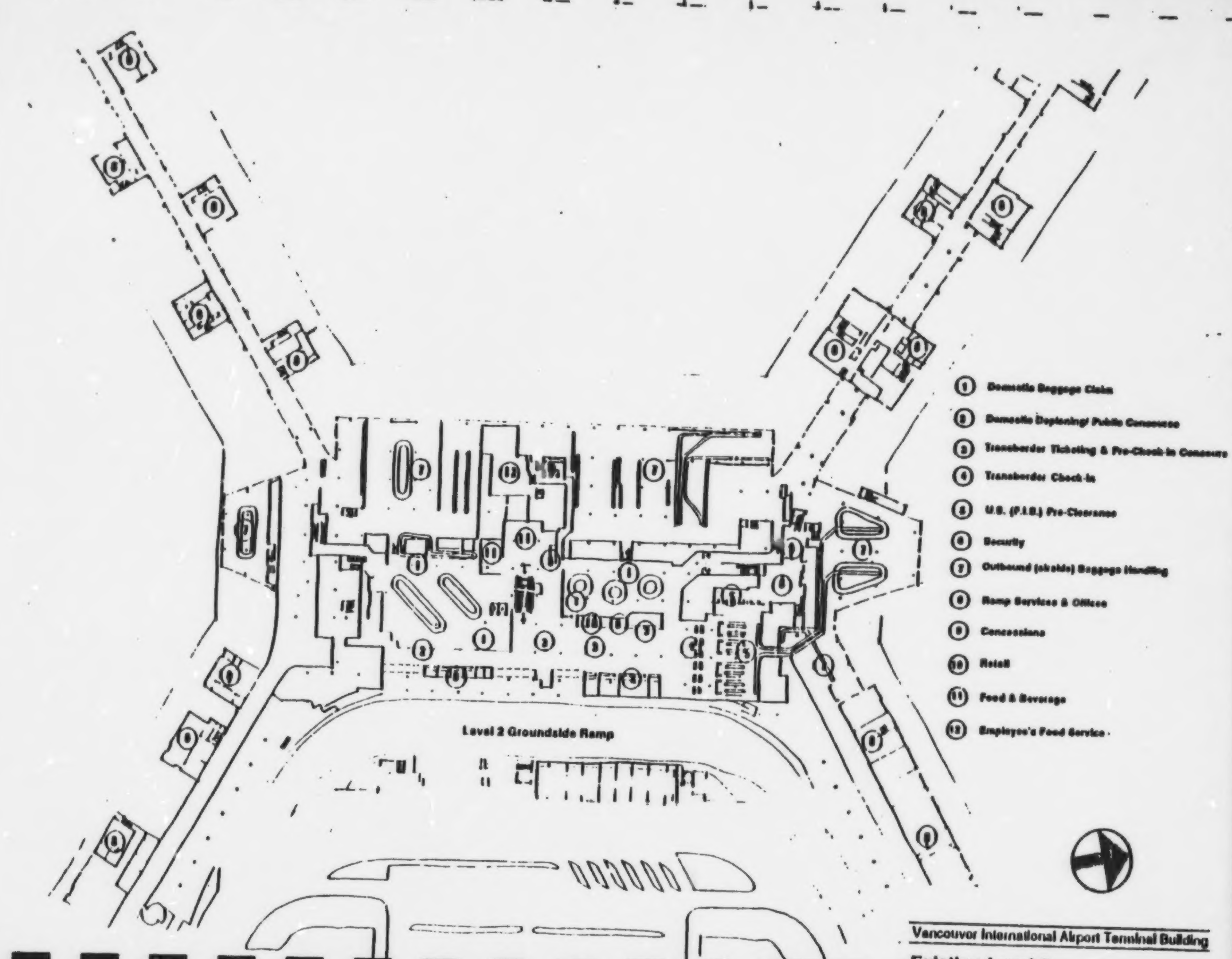
Price Waterhouse focused on the optimal management structures, its financial viability, and worked through the different scenarios in a detailed financial mode.

Appendix 2.1


① International Deplaning Public Concourse
② CIS/ P.I.L. & Queue
③ C.I.S. Canadian Immigration Office & Services
④ International Baggage Claim
⑤ C.I.S. Secondary Canada Customs Inspection
⑥ International Deplaning Concourse/ Semi- Secure Area
⑦ Canada Customs Offices
⑧ International Arrivals Tunnel
⑨ Concessions
⑩ Food & Beverage
⑪ Transport Canada Offices
⑫ Storage/ Maintenance
⑬ Groundside Loading Dock
⑭ Transfer Bag Drop
Level 1 Groundside Ramp

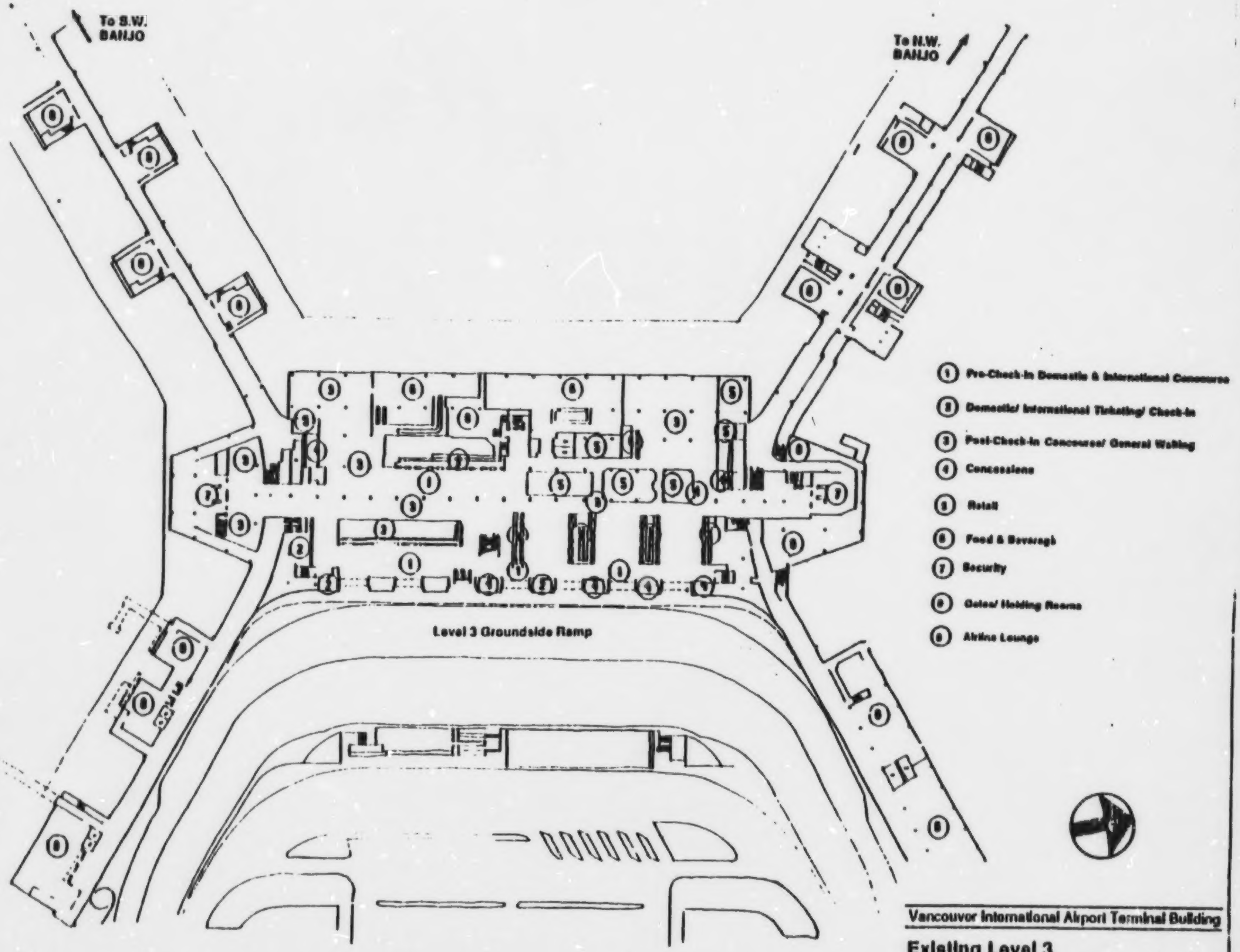
Vancouver International Airport Terminal Building

Existing Level 1
Configuration (N.T.S.)


① Domestic Baggage Claim
② Domestic Deplaning/ Public Concourse
③ Transborder Ticketing & Pre-Check-in Concourse
④ Transborder Check-in
⑤ U.S. (F.I.S.) Pre-Clearance
⑥ Security
⑦ Outbound (airside) Baggage Handling
⑧ Ramp Services & Offices
⑨ Concessions
⑩ Retail
⑪ Food & Beverage
⑫ Employee's Food Service
Level 2 Groundside Ramp

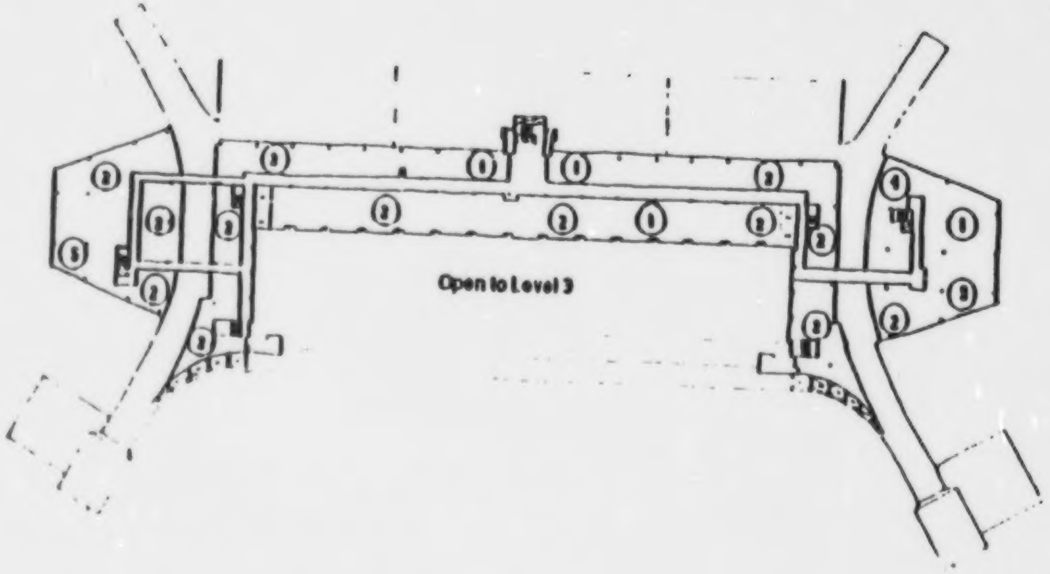
Vancouver International Airport Terminal Building

Existing Level 2 Configuration N.T.S.


To S.W. BANJO
To N.W. BANJO
Level 3 Groundside Ramp
1 Pre-Check-in Domestic & International Concourse
2 Domestic/ International Ticketing/ Check-in
3 Post-Check-in Concourse/ General Waiting
4 Concessions
5 Retail
6 Food & Beverage
7 Security
8 Gates/ Holding Rooms
9 Airline Lounge

Vancouver International Airport Terminal Building

Existing Level 3 Configuration (N.T.S.)


Open to Level 3
①
②
③
④

① Transport Canada Offices

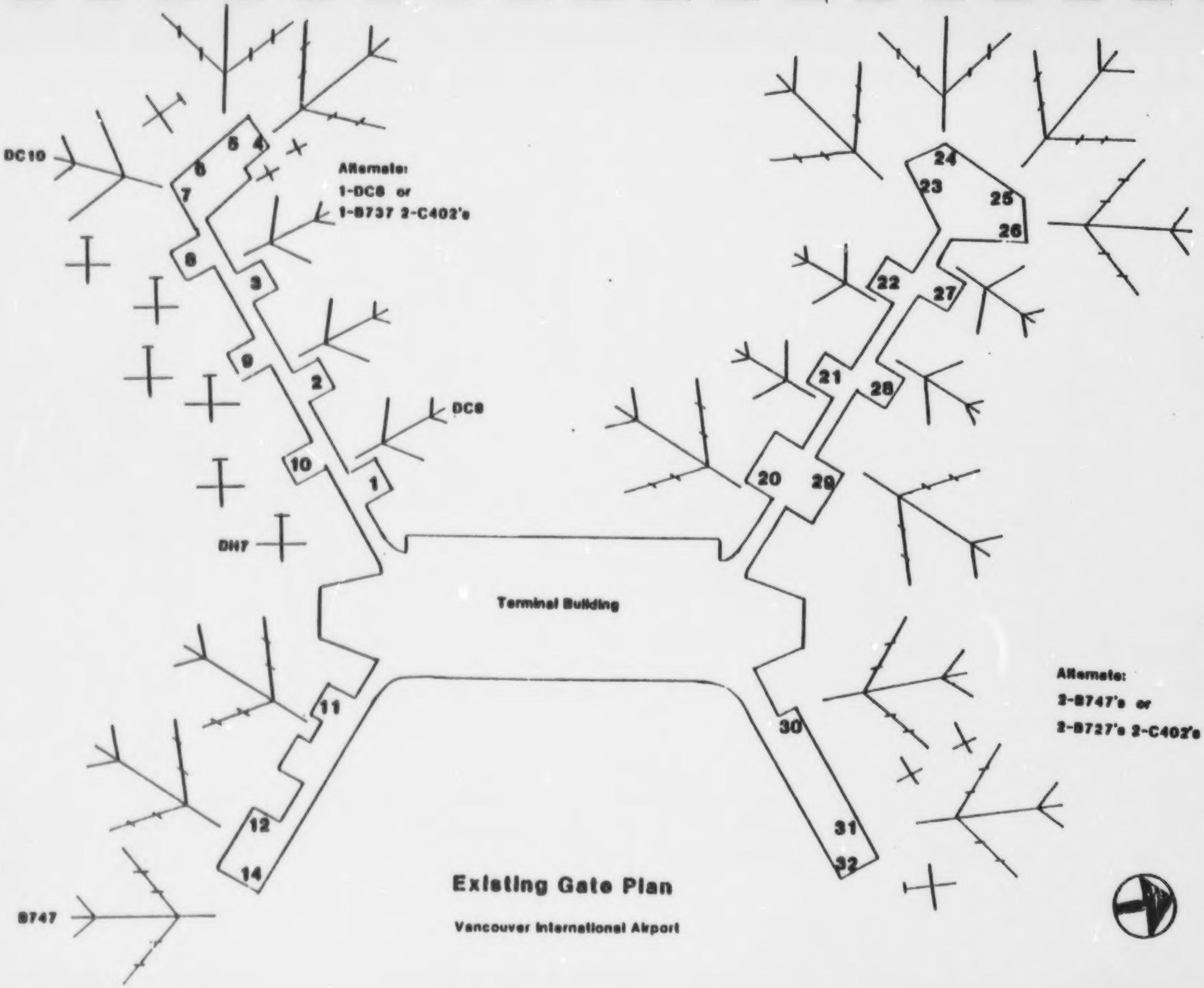
② General Offices

③ Airline First-Class Lounge

④ D.V.L.

Vancouver International Airport Terminal Building

Existing Level 4
Confi[illegible]ion [illegible]N.T.S.


DC10
Alternate:
1-DC8 or
1-B737 2-C402's
DC8
DH7
B747
Terminal Building
Alternate:
2-B747's or
2-B727's 2-C402's
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Existing Gate Plan

Vancouver International Airport

Appendix 2.2

```
DATE: 87.10.27

                                        NIMS LEASE INVENTORY
                                     DOCUMENT REVIEW D.F. REPORT                                                   PAGE    1
               USER-  REGION                                                                 RENT      LEASE     LEASE
SITE__________ ID____ LEASE. LESSEE____________________________ SPACE OCCUPIED CATEGORY_____ REVIEW___ REVIEW___ RENEWAL__ EXPIRY__
VANCOUVER             89722  CARA OPERATIONS LIMITED
VANCOUVER             0A0062 VANCOUVER AIRLINE CARTAGE
VANCOUVER             PR1395 PERIMETER TRANSPORTATION LTD.      INDUST/COMM LAND &/OR BUILDING                                80/09/09
VANCOUVER             PR2356 SEA GULL LEASING LTD. (BUDGET)                                                                   88/10/31
                                                                OFFICE-ATB                                          83/09/05  93/09/09
                                                                BOOTH                                                         89/12/31
VANCOUVER             PR2355 TILDEN RENT-A-CAR SYSTEM LTD.      CAR PARKING LONG TERM
                                                                OFFICE-ATB
                                                                BOOTH                                                         89/12/31
VANCOUVER             PR2356 HERTZ CANADA LIMITED               CAR PARKING LONG TERM
                                                                OFFICE-ATB
                                                                BOOTH                                                         89/12/31
VANCOUVER             PR1515 PACIFIC BUILDING MAINTENANCE LTD.  CAR PARKING LONG TERM
VANCOUVER             00355  TILDEN RENT-A-CAR INC.
                                                                VEHICLE RENTAL SERVICE CENTER                                 80/10/14
                                                                                                                    89/05/31  94/05/31
```

DATE: 87.10.27

NIMS LEASE INVENTORY
DOCUMENT REVIEW D.P. REPORT

SITE	USER-ID	REGION LEASE	LESSEE	SPACE OCCUPIED CATEGORY	RENT REVIEW	LEASE REVIEW	LEASE RENEWAL	EXPIRY
VANCOUVER		VA0076	VANCOUVER AIRCAP LTD.	OFFICE-ATB				88/05/31
VANCOUVER		VA0019	BADUE JAFFES DBA SUNSET TOURS	TICKET COUNTER (Hotels Plus Tourist Centre)				98/03/31
VANCOUVER		PB7626	BRITISH COLUMBIA TELEPHONE COMPANY	TELEPHONES				05/03/31
VANCOUVER		PR2147	CANADIAN LOCKER COMPANY LIMITED	Baggage Check /Lost and Found/Baggage Carts				90/05/31
VANCOUVER		69266	BRITISH COLUMBIA TELEPHONE COMPANY	TELEPHONES		88/05/31		
VANCOUVER		87015	CARA OPERATIONS LIMITED	BAR/LOUNGE	87/09/10			83/05/09
VANCOUVER		V1/334	MEDIACOM INC. (ADVERTISING)					83/04/30
VANCOUVER		PR2/60	VANCOUVER AIRPORT CHAPLAINCY	OFFICE-ATB				88/05/31
VANCOUVER		VA0008	HOLLAND AMERICAN LINE WESTOURS INC.	C'TESY CTRO. Cruise Ship				87/09/26
VANCOUVER		VA0010	PRINCESS CRUISES	C'TESY CTRO. Cruise Ship				87/10/02
VANCOUVER		VA0016	MARITIME CENTRIESS INTERNATIONAL INC.	KIOSK				87/09/30

```
VANCOUVER     106993  HERTZ CANADA LIMITED             VEHICLE RENTAL SERVICE CENTER
VANCOUVER     03176   AVISCAR INC.                     VEHICLE RENTAL SERVICE CENTER      99/0?/31
VANCOUVER     VA0015  [illegible] CATERING LTD.                                           09/05/31
VANCOUVER     PR2275  [illegible]                      TICKET COUNTER                     07/10/31
                                                       OFFICE-ATD                         09/12/31
VANCOUVER     VA0010  [illegible] GOLDBERG (Caterer)   CAR PARKING LONG TERM
VANCOUVER     PR2357  AVISCAR INC.                     SNACK BAR
                                                       SOUTH                              07/12/10
                                                       OFFICE-ATD                         09/12/31
VANCOUVER     PR2015  SUNNY BUS SERVICE LTD.           CAR PARKING LONG TERM
VANCOUVER     PR2762  SKY CHEF CATERING                BUS/LIMO PICKUP
VANCOUVER     VA0017  [illegible], [illegible] (Caterer) COFFEE SHOP (South Terminal)     0C/04/30
VANCOUVER     CA0022  [illegible] CANADA LTD.          SNACK BAR                          07/12/31
                                                       TICKET COUNTER Ticket Counter      27/10/31
                                                       CAR PARKING LONG TERM              09/12/31
```

DATE: 87.10.27

NIMS LEASE INVENTORY
DOCUMENT REVIEW D.F. REPORT

SITE	USER-ID	REGION LEASE	LESSES	SPACE OCCUPIED CATEGORY	RENT REVIEW	LEASE REVIEW	LEASE RENEWAL	EXPIRY
VANCOUVER		FR2719	W.H. SMITH LTD.	COMPACTOR (Garbage Compactor)				
VANCOUVER		PR1393	CARA OPERATIONS LIMITED	CONCESSION SHOP			86/12/31	
VANCOUVER		PR1394	CARA OPERATIONS LIMITED	CONCESSION SHOP				88/09/09
VANCOUVER		FR2470	ALLDERS INTERNATIONAL (CANADA) LTD.	CONCESSION SHOP Duty Free				88/09/09
VANCOUVER		PR1404	W.H. SMITH LTD.	CONCESSION SHOP Book store			90/11/30	00/11/30
VANCOUVER		PR2305	MOUGER JOE'S BOOKSTORE LIMITED	CONCESSION SHOP				88/12/09
VANCOUVER		VA0030	W.H. SMITH LTD.	STORAGE NON ATP				88/03/31
				STORAGE ATP	87/12/31			88/12/09

DATE: 87.10.27

RIMS LEASE INVENTORY
DOCUMENT DRIVEN D.P. REPORT

SITE	USER-ID	REGION LEASE	LESSEE	SPACE OCCUPIED CATEGORY	RENT REVIEW	LEASE REVIEW	LEASE RENEWAL	EXPIRY
VANCOUVER		PR2476	DEAN'S CHOCOLATES LTD.	STORAGE ATG				87/09/30
VANCOUVER		PR1426	CARA OPERATIONS LIMITED	CONCESSION SHOP				88/09/30
VANCOUVER		PR1427	DEAN'S CHOCOLATES LTD.	CONCESSION SHOP				89/02/14
VANCOUVER		PR1406	JET SET SAM SERVICES INC.	CONCESSION SHOP				88/11/30
VANCOUVER		VA0646	DEAN'S CHOCOLATES LTD.	STORAGE ATD	88/01/01			89/02/14
VANCOUVER		VA0031	JET SET SAM SERVICES INC.	STORAGE ATD	87/12/31			88/05/30

04 87.10.27

BIMS LEASE INVENTORY
DOCUMENT REVIEW D.F. REPORT

SITE	USER-ID	REGION LEASE	LESSER	SPACE OCCUPIED CATEGORY	RENT REVIEW	LEASE REVIEW	LEASE RENEWAL	EXPIRY
VANCOUVER		PR2590	STOCKITE INVESTMENTS LTD. (CLASSIC LIMOUSINE)	BUS/LIMO PICKUP			91/07/31	96/07/31
VANCOUVER		PR1765	PERIMETER TRANSPORTATION LTD.	OFFICE-ATB (Hustle Bus)				08/09/09

.TE: .27

BIMS LEASE INVENTORY
DOCUMENT REVIEW B.P. REPORT

SITE	USER-ID	ASCTIM LEASE	LESSEE	SPACE OCCUPIED CATEGORY	RENT REVIEW	LEASE REVIEW	LEASE RENEWAL	EXPIRY
VANCOUVER		PX1077	PACIFIC VENDING, DIVISION OF FIVES INTERNATIONAL	Video Games				58/04/30
VANCOUVER		PX2062	MINISTER OF PUBLIC WORKS	MISCELLANEOUS (Post Office)	87/12/31			85/06/30
VANCOUVER		PX2089	BANK OF AMERICA CANADA	CONCESSION SHOP (Foreign Exchange)				86/12/31
VANCOUVER		64598	MINISTER OF PUBLIC WORKS	MISCELLANEOUS (Post Office)				
VANCOUVER		PX1011	TELE TRIP COMPANY, INC.	DISPENSOR (Insurance)		87/06/30		28/05/30
VANCOUVER		PX1957	SMITH RESEARCH PRODUCTS CO. LTD.	TV Chairs				07/09/30
VANCOUVER		PX2057	BANK OF AMERICA CANADA	STORAGE ATB } Foreign Exc.				87/12/31
				OFFICE-ATB				
VANCOUVER		PX2655	BRITISH COLUMBIA LOTTERY CORPORATION	STORAGE NON ATB Lottery				85/02/28
VANCOUVER		PX2012	TELE-TRIP COMPANY, INC.	STORAGE ATB } Insurance				87/09/30
VANCOUVER		VA0044	TELE-TRIP COMPANY, INC.	STORAGE ATB				02/09/30
VANCOUVER		VA0048	BANK OF AMERICA CANADA	STORAGE ATB Foreign Ex.	08/01/01			08/12/31
				OFFICE ATB				

Appendix 2.3

VANCOUVER INTERNATIONAL AIRPORT

Main Air Terminal Building

AREAS/SQUARE METRES

Type of Space	Level 1	Level 2	Level 3	Level 4	TOTAL
BAGGAGE	--	1,258.98	--	--	1,258.98
CONCESSION	366.54	925.41	2,489.59	--	3,781.54
COUNTER	99.80	321.72	967.65	--	1,389.17
INDUSTRIAL	3,132.18	2,364.24	--	--	5,496.42
INDUSTRIAL (Air Conditioned)	501.38	2,292.52	6.60	--	2,800.50
OFFICE	1,727.95	2,259.20	1,158.01	4,056.23	9,201.44
PUBLIC	8,279.80	6,119.50	19,049.72	720.33	34,169.35
SUPPORT	3,009.68	2,997.24	197.52	329.52	6,533.96
WASHROOM	156.13	145.31	391.80	92.53	785.77
WASHROOM (Exclusive)	194.86	332.86	65.68	24.30	617.70
COVERED	--	3,041.30	--	--	3,041.30
INDUSTRIAL (Unheated)	--	689.75	--	--	689.75
TOTAL	17,468.32	22,748.03	24,326.57	5,229.96	69,765.88

26 October 1987

031-ks13

Appendix 2.4

AIRPORT CENTRE
COMMERCIAL REVENUES

Source	Area Leased (ha)	1985/86 Rental Revenue
Car Parking	15.1000	$ 5,465,235.00
IAT Cargo	8.2300	217,512.68
Air Canada Cargo	3.8700	66,215.70
Air Canada Maintenance Base	17.4400	298,398.40
CP Air Maintenance Basel	23.1600	141,932.34
Post Office - AMF	0.4240	34,425.40
Vehicle Rental Service Centres	2.3020	55,643.40
CARA Flight Kitchens	1.3340	16,401.00
Eagle Flight Catering	0.6505	26,597.64
Other Commercial Leases	31.6200	596,376.59
DND Hangar	1.1360	41,208.16
Recreational (City of Richmond)	0.6871	1.00
TOTALS	105.3500	$ 6,948,947.31

APPENDIX 2-5

DRAFT / BROUILLON

POLICY, STANDARDS, AND GUIDELINES FOR THE DETERMINATION OF AIR TERMINAL BUILDING SPACE RENTAL RATES

AK-32-10-100

Coordinator: C.V. Herbert
(998-5163)

Airports Authority Group
Airport Marketing Branch
Pricing and Investment Division

OPR: EDA/DKD/KDI/

JULY
[redacted] 1986

(v) Space rental rates shall be determined prior to the construction of new terminal buildings or the renovation, expansion, or modification of existing buildings. These rates shall be agreed upon by the tenants in advance of construction, for the purpose of fixing the capital costs used to calculate the capital component, and the first year O&M component.

(vi) The vehicle for reachihg an agreement shall be the Carrier Consultative Committee or other persons authorized by the carriers in special circumstances. In cases where no agreement is reached with respect to space rental rates or excessive costs, independent opinion or arbitration shall be sought. Arbitration will be concerned with the costs of the air terminal building to be reflected in the space rental rates and the application of the principles for the determination of the space rental rates.

(vii) An example of a space rental rate study is found in Appendix A. This format shall be followed, where possible.

(b) Measurement of Space

The area of the air terminal building will be measured in accordance with the guidelines for the determination of space rental rates.

(c) Capital Costs

(i) (1) Capital costs shall represent those costs directly attributable to the air terminal building. They shall include estimated construction costs, architectural fees, and project management fees.

(2) For buildings existing in February 1985, actual capital costs shall be used in the calculations.

Where the architectural work and/or the project management is performed by Airports Authority Group staff, the amount included for these services in the capital cost shall be comparable to the fees recommended by the appropriate professional associations for a similar type of project in the area of construction.

(ii) Construction costs shall be broken down into cost elements that represent the costs of individual items associated with the construction of the air terminal building. Architectural and project management fees shall be allocated to the capital cost elements, based on the proportion of the total cost elements the cost element represents. Excessive costs, including their share of architectural and project management fees, shall be excluded.

(iii) The cost elements shall be grouped as follows:

(1) basic costs that are attributable to all cost centres;

(2) above-basic costs that are attributable to only certain cost centres.

Government of Canada / Gouvernement du Canada

MEMORANDUM / NOTE DE SI

In-House File
Dossier maison
No. [illegible]

SECURITY CLASSIFICATION DE SECURITE

OUR FILE NOTRE REFERENCE
5156-20-2-0 (A/KDI/A)

YOUR FILE VOTRE REFERENCE

DATE
JUL 22 1985

TO
A
QMA - Aéroport international
de Dorval
H4Y 1A8

FROM
DE
AAA/AAAD/A - Ottawa
K1A 0N8

SUBJECT
OBJET
POLITIQUE POUR LA DETERMINATION DES TAUX DE LOCATION AUX AEROGARES - L'APPROBATION OBLIGATOIRE DES PROJETS DES AEROGARES

Nous référons à votre note de service du 30 mai 1985 concernant le sujet en rubrique.

Nous avons étudié vos questions et voici nos réponses:

1. Tous les PAD sont sujets à cette politique; il en suit que, si le Conseil du Trésor ne donnera pas son accord à un projet sans l'accord aux taux de location, Transports Canada ne donnera pas son accord non plus.

2. a) Nous croyons que la majorité des transporteurs canadiens sont membres de ATAC et donc, leur approbation sera requise pour tous les projets aux aérogares. Les transporteurs étrangers doivent payer les taux de location courants pour occuper l'espace dans nos aérogares. Ils doivent être mis au courant de nos projets envisagés et de l'impact de ceux-ci sur leurs taux de location mais leur accord n'est pas indispensable.

AIR TERMINAL BUILDING RENTAL RATE POLICY - MANDATORY APPROVAL OF ATB PROJECTS

Reference is made to your May 30, 1985 memorandum concerning the above noted subject.

We have reviewed your questions and provide the following responses:

1. All PADs are subject to this policy; it follows that if the Treasury Board would not approve a project without rental rate agreement, neither would Transport Canada.

2. a) We believe that the majority of Canadian carriers are members of ATAC and therefore their approval would be required for ATB projects. Foreign flag carriers must pay current rental rates in order to occupy space in our ATBs. They should be made aware of our planned projects and the impact on the rental rates, but their accord is not necessary.

... 2

b) Dans les situations ou la majorité des locataires importants donnent leur accord aux taux de location pour un projet, le projet doit avoir lieu. Les opérateurs mineurs seront obligés de payer les nouveaux taux de location et seront peut-être obligés de réduire leurs besoins à la mesure de leur finance.

3. Nous sommes d'accord que les projets pour l'entretien et la réparation qui pourront entraîner des frais de réparation élevés si négligés, ne doivent pas s'attarder à cause d'une absence d'accord. La soumission au Conseil du Trésor pour le toit de Mirabel sera employée comme cas expérimental en vue de déterminer si le Conseil du Trésor acceptera un projet à un aérogare de ce caractère.

4. Les locataires doivent être intégrés aussitôt que possible dans l'étape de planification du projet. Une note de service (copie jointe) fût envoyée aux régions le 15 novembre 1984 indiquant à quel niveau des étapes de planification, l'accord des transporteurs est requis. Etant donné que notre horizon de planification englobe deux ou trois ans, nous désirons être capables d'intégrer les transporteurs ou, au moins, les rendre conscients de nos intentions bien en avance de la date du commencement de nos projets.

b) In situations where the majority of major tenants agree to rental rates for a project, the project must proceed. Smaller operators will have to pay the revised rental rates and may have to consider downsizing their requirements to what they can afford.

3. We agree that projects for maintenance and repair that could result in higher repair costs if left unattended should not be delayed as a result of a lack of agreement. The Mirabel roof Treasury Board Submission will be used as a test case to determine whether TB will accept an ATS project of this nature.

4. Tenants should be involved as early as possible—in the planning stage of a project. A memorandum was sent to Regions on 15 November 1984 (copy attached) indicating at which stages of the planning process carrier agreement is required. Given that our planning horizon covers two or three years, we should be able to include the carriers, or make them aware of our future projects, well in advance of the starting date.

... 3

5. Dans une note de service du 13 mars 1985 (copie jointe) nous avons indiqué que les transporteurs préfèrent que leur personnel d'administration centrale soit directement impliqué dans l'établissement des taux de location et que les directeurs de chaque station doivent être obligatoirement mis au courant.

Nous vous remercions pour vos suggestions dans cette affaire et espérons que notre correspondance sera utile.

5. In a memorandum of 13 March 1985 (copy attached), we informed that the carriers preferred to have their Headquarters' personnel directly involved in the rental rate process and that Station Managers should be advised accordingly.

We thank you for your comments in this matter and trust the foregoing has addressed your concerns.

Original Signed by
Original signé par
G. Y. SEBASTYAN

Pièces-jointes

Attachments

This memorandum re-typed 18 July 1985
Originator: C.V. Herbert - A/KDI/A 996-0151
(M3 thru M9,M1:nb)

Appendix 2.6

AIRPORT DEVELOPMENT CONSTRAINTS

The Airport Development Constraints section of the Commercial Plan provides information on restrictions related to Obstacle Limitation and Electronic Zoning, Physical Constraints and noise Restrictions as well as Land Ownership, Policy and Community Constraints. One major physical constraint to development was the requirement for pre-loading construction sites on Sea Island due to the high water table. Land ownership is also a constraint in that the prolonged land exhcange with the Provincial Government for Lots 1153 and 1154 has retarded commercial development in Airport South. More recently, a court decision directing Transport Canada to release the Grauer property under Section 24(1) of the Expropriation Act could severely restrict any long term development of Airport North. Some of the policy constraints identified in the Commercial Plan include the requirements to obtain TBAC/FLM approach for non-aviation developments which restricts the ability to negotiate commercial opportunities as they arise and national pricing policies which restricts the airport's ability to compete effectively for the Pacific Rim market. Some of the community constraints covered in the plan include the City of Vancouver and the Township of Richmond's strong opposition to outdoor advertising on the airport and Richmond's imposition of Development Cost Charges of $26,000.00 per acre for any commercial development at V.I.A.

Appendix 2.7

OPERATIONAL CONSTRAINTS AT
VANCOUVER INTERNATIONAL AIRPORT

Operational constraints can be divided into two main categories as follows:

1. Environmental
2. Facility

Environmental constraints are imposed by the location of the airport which is sited on a low lying tidal flat on a migratory route for birds. Specific constraints are:

a) Absence of a hot fire training facility for CFR due to air and water pollution. Training is currently undertaken at Abbotsford Airport.

b) At certain times of the year, fog of varying intensity can affect the airport resulting in air traffic delays and occasional diversion of traffic to other airports. Abbotsford is a prime alternate airport for fog diversions but is not used by all air carriers.

c) Construction work on the airport particularly on the margins of airport property is subject to environmental review by agencies such as Fisheries & Oceans and Environment Canada. Major construction is always subject to the EARP process which can significantly delay project implementation.

d) Noise from the airport impacts the south slope area of Vancouver and areas in Richmond on runway approaches and adjacent to the airport. This has resulted in noise abatement procedures being published and restrictions on certain non-noise certified aircraft operations late at night. Aircraft noise is always a potential issue.

e) Weather conditions attributable to the coastal climate require full IFR separation for arriving and departing aircraft at certain times of the year. This results in delays to some flights and cancellation of others.

f) Airspace management at Vancouver International is complicated by factors such as mountainous terrain, the U.S. Border, and complicated traffic mix in the terminal area. This results in a somewhat complex airspace system which can be regarded as another constraint on the airport.

Facility constraints can be related to airfield and ATB facilities.

a) Construction and maintenance work on or adjacent to manouvering areas cannot be carried out in daytime hours due to traffic volumes. It is normally performed at night. This results in a premium being paid for work carried out and the need for greater coordination to ensure operational safety is maintained.

b) Physical constraints of U.S. preclearance facilities and airline check-in counters limit the number of transborder flights that can be accommodated at any one time. Airlines are required to juggle their schedules because of this limitation.

c) The growth in commuter traffic has caused constraints on jet gate availability at the Main Air Terminal Building. This is being addressed in the medium term through capital projects to provide commuter gates but at present commuter and jet aircraft share facilities that were designed for jet aircraft.

d) Conflicting use of Level II (domestic arrivals, transborder departures) combined with high use limit access to the curb by the general public and various commercial services.

e) Ownership and control of Level III outbound baggage systems by the major domestic air carriers makes it difficult to allocate space to new carrier entrants who may offer competing services.

f) Large aircraft are primarily confined to the one major runway. Fully loaded, they are unable to use the shorter crosswind runway. The lack of a parallel runway can result in delays at peak periods and whenever maintenance work is required.

g) Simultaneous runway use of intersecting runways at CYVR permits maximum capacity during good weather, however, in poor weather conditions, or with the loss of simultaneous capability delays result for all traffic. (CALPA is currently protesting the simultaneous use of intersecting runways at YVR.)

Appendix 2- 8

VANCOUVER INTERNATIONAL AIRPORT
OPERATIONAL CONSTRAINTS

Transport Canada Management

Much has been said about the inherent limitations on Transport Canada because of federal statutes, regulations and departmental policies. These limitations are, in respect of local control and management of airport operations, severe. While changes have been made to delegate more authority to Transport Canada in Ottawa and, more importantly, to the individual aiport general manager, the fact remains it is impossible, given the current fiscal and administrative systems, to delegate effective local control and management authority without fundamental change. Recognizing that many of these controls and procedures are government wide, it is unrealistic to expect significant changes. As long as local airports are administered as part of a federal department of government, the delay and limitations of a national system will be with us.

Legislative Controls

The current legislative system effecting management of the airport is grounded in two federal statutes, the Department of Transport Act R.S.,c.79,s.1 and the Public Lands Grants Act R.S.,c.224,s.1.

Flowing from this legislation are a series of regulations outlining the delegation of authority and approval procedures. Principal among them are the Public Lands Leasing and Licensing Regulations P.C.1982-2718 and the Government Airport Concession Operations Regulations P.C.1979-1332. Supplementing these statuatory instruments are Transport Canada policies, directives and control mechanisms, in varying degree of formality, which outline the limits and controls on initiating and implementing policy, and the process for keeping colleagues and superiors informed. An example of a more formal directive is the "Appointment Document" used by Transport Canada outlines the authority granted by the Minister of Transport regarding the leasing and licensing of public lands, the issuance of authorizations pursuant to the Government Airport Concession Operations regulations and the use of property by provincial governments and other federal departments. This document sets out, in suitable detail, the airport management authority of the Airport General Manager right up to the Executive Director, Airports Authority Group in Ottawa.

...2/

Over all of these specific regulatory and statuatory authorities, lies the general governmental fiscal and administrative controls, everything from the authority of the Treasury Board, the Auditor General reporting requirements, federal tendering procedures, public services personnel requirements and many more.

While the system of delegated authority is, arguably, sufficient to allow for the orderly operation of the airport, it is clearly not designed to give local management any real say or authority to institute significant management initiatives. The need for departmental approval in Ottawa and often, Treasury Board or Cabinet approval has built into it a delay and inflexibility that does not support bold initiative. For example, retail leases at the airport cannot exceed ten years or 3 million dollars in total value before they require Treasury Board approval. For capital expenditures, the airport general manager has discretion up to only $250,000 before it must be approved by a series of officials and review boards in Ottawa. If the expenditure is in excess of ten million dollars, it must also be approved by the Treasury Board. Almost a dozen levels of approval are required. Even then they must go through a government administered tendering process that, for significant programs, can take up to a year. If the contract must go to Treasury Board it follows the same process but with the additional steps of approval up through the hierarchy in Ottawa to the program review board of Transport Canada, ministerial approval and submission to the Treasury Board.

Not only the amount but the timing of requests can be critical. Projects that come too late in the cycle may be deferred to the next budgeting excercise. It is not uncommon for projects to be pushed ahead year after year because of limited funding. Major capital projects can sit three to seven years in the system before they gradually work their way to the top of the departmental priority list.

As for operational costs, the Vancouver, International Airport is granted an annual budget following departmental review as part of a national allocation of resources. General managers are expected to operate the airport within these operational funds and, while additional funds can be provided for emergencies, general funding is strictly controlled.

...3/

While there are undoubtedly strengths in a national system and a justification for a hierarcy of approvals when public funds are involved, the central lesson is that not ony is there a built-in delay in the tendering and the approval process but programs of any size must compete nationally for approval and funding. Nor does it necessarily matter that the airport requesting funds is a net revenue generator in the system. A robust airport has its income allocated according to national policies that have nothing to do with generating maximum return on investment or a sharing of revenues generated in the area.

While it is always open for any major initiative to become a political priority and, thereby, obtain priority funding, in the usual scheme of things the federal system of airport administration is characterized as delegating sufficient authority to undertake the usual administration of the airport but demanding significant capital improvements or policy initiatives reflect national rather than local requirements, and only after approval out of Ottawa. Thus each airport only puts forward programs that can compete successfully with other airport's programs following national guidelines. A capital expansion program for Vancouver designed to give it a competitive advantage over other airports in Canada would require the concurrence of Transport Canada in Ottawa that it was in the national interest to do so. This competition for limited funds suggests a program whose only virtue was local economic development would have little chance, since regional economic development is not within the legislative mandate of Transport Canada.

While there may be changes to the system in streamline approvals the essential character, that is, a hierarchy of approval for significant expenditures culminating in approval in Ottawa based on national policy will not be changed. While such a system has many strengths it does pose serious problems if one wishes to undertake significant activity at the Vancouver, International Airport based on local conerns or that provides a competitive advantage over Canadian airports. This, combined with the inherent delay suggests the modern competitive airport environment requires an alternative management system.

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Appendix 2-9

Major Issues at Vancouver International Airport

The inherent problems of delay, national policy and inability to respond to particular concerns has resulted in an airport that, while a source of pride and satisfaction in many areas, continues to have serious short comings that do not appear to have been resolved. Extensive interviews were carried out with interests doing business at the airport, federal officials, users, air carriers, aviation service industry, consulting engineers, municipal governments, business organizations and special interests groups. While there was a general concensus that the airport is well run in the sense it is well maintained and those expenditures required to meet essential demands are undertaken (as witness of the changes brought in time for EXPO 86) there was also general concensus that the airport was not providing as much as it could to the community nor was it able to respond to commercial opportunities as they presented themselves.

While a number of the concerns regarding the airport were general know matter what management structure was employed (noise pollution, local road traffic congestion, employee relations, enivronmental impact of third runway and increased air traffic) there were a number of concerns relating specificallly to the current national administration of the airport. Interviews revealed the following:

1. Current management structure is quite competent but hindered by bureaucracy in Ottawa.

2. Current structure doesn't encourage risk taking or innovation. Current personnel restricted to operating business as usual within imposed guidelines.

3. Airport has considerable economic development potential that remains untapped.

4. Earnings generated by Vancouver International Airport should be reinvested in facility improvement rather than considered general government revenue.

5. Lack of long range planning. Planning process and budget allocations look to short term rather than long range requirements.

6. Congestion at peak periods remains unresolved. Current management response is to construct more facilities rather than seeking alternate solutions.

7. Lack of sensitivity to South Terminal needs, such as passenger connection.

...5/

8. Little done to promote intermodal transportation systems and integrating the airport into the transportation network of the province.

9. Lack of coordinated and focussed marketing program integrated into the tourism and other marketing programs of the province.

10. Pre-clearing services by U.S. Customs and Immigration give in-transit passengers advantage to use American over Canadian airlines.

11. Current international intransit facilities are inadequate to accomodate international travel and promote Vancouver as in in-transit airport.

12. Limited community and business input into the commercial development prospects for the airport lands.

13. Retail philosophy of main terminal building does not meet international traveller requirements nor make the airport a retail destination point for travellers or the local community.

14. The current management structure encourages administering the airport as a public service but does nothing to encourage an entrepreneurial or economic approach which would encourage innovative developement on creative approaches to the opportunities available.

The general impression gained from observation and interviews is that while the airport is competently managed, the mandate, procedures and policies of a national transportation system does not allow the flexibility, innovativeness or responsiveness to successfully compete in the current deregularized aviation industry. The clear message was that "a business as usual" approach will not do, that the airport must become much more aggressive and competitive particularly in gaining inroads in the Pacific Rim and that the current system is incapable of doing so. There is also a general consensus that there is no reason, provided Transport Canada retains responsibility for navigation, safety and licensing, that the airport facilities themselves could not be run on a more independent basis.

...6/

FINANCIAL POSITION OF SMALL AIRPORTS

As described in Chapter 2, there are a number of smaller airports in the vicinity of VIA. It may be deemed necessary or advisable to include one or more of these airports under the same local authority and therefore, their financial position will have to be considered. As a preliminary review, four of these airports were examined, namely:

- Abbotsford - a local commercial airport which serves as VIA's alternative site in case of fog or bad weather and is owned and operated by Transport Canada.

- Pitt Meadows - also a local commercial airport which serves the general aviation and training traffic and is also owned and operated by Transport Canada.

- Langley - a general aviation airport which is owned by the Township of Langley. Langley also operates the airport in all aspects except traffic control which is operated by Transport Canada.

- Boundary Bay - a general aviation airport which is owned by Transport Canada and is operated by Aztec Aviation for a 49 year lease.

More detailed comments regarding these airports is found in the following pages.

Relatively detailed financial information is available for the two airports which are operated by Transport Canada, namely Abbotsford and Pitt Meadows.

As shown in the following pages:

- Abbotsford has shown a cash flow deficit for each of 1984, 1985 and 1986. The cash flow deficit in 1986 was negative $752,000 compared to negative $212,000 in 1985. In 1986, collection of accounts receivable were down 19% while salaries, wages and benefits were up 140% from $55,000 in 1985 to $132,000 in 1986 and payments of accounts payable and holdbacks increased from $525,000 to $286,000.

- Contributions from operations at the Abbotsford airport was negative $18,000 in 1986 after accounting for $76,000 in depreciation expenses for that year. In 1985 however, contributions from operations were positive $203,000 before accounting for headquarter and regional overhead and grants in lieu of taxes.

- In 1986, Abbotsford reported $4,552,000 in total assets up from $4,005,000 in 1985.

- In 1984, 1985 and 1986, Pitt Meadows reported a negative cash balance equal to $77,000 in 1984, $67,000 in 1985 and $1,737,000 in 1986. The large cash deficit in 1986 resulted from increased investment at the airport as shown on the increase in fixed assets from $1,550,000 in 1985 to $3,252,000 in 1986.

- Contributions from operations at Pitt Meadows equaled $39,000 after accounting for $38,000 in depreciation expenses but before any headquarters and regional overhead expenses and before grants in lieu of taxes.

As regards the Langley airport, a statement of revenue and expenses was obtained from the Corporation of the Township of Langley (see Appendix 7-10). In 1986 the Langley airport collected about $60,000 in leases, tie downs and gasoline concessions and incurred about $13,000 in expenses leaving $47,000 in operating surplus before depreciation and before accounting for the operating of traffic control (operated by Transport Canada). Balance sheet and cash flow statements are not available for the Langley Airport. For VIA to operate the Langley Airport, the transfer of the airport would have to be negotiated between Langley and Vancouver.

The Boundary Bay airport is owned by Transport Canada but Aztec Aviation has a 49 year lease to operate the airport. Aztec Aviation is a privately owned company and financial information is therefore confidential. A schedule of gross revenues is presented to Transport Canada each year. A copy of this schedule is presented as Appendix 7-11. Because of the 49 year lease, an agreement for VIA to operate the airport would have to be worked out with Aztec Aviation.

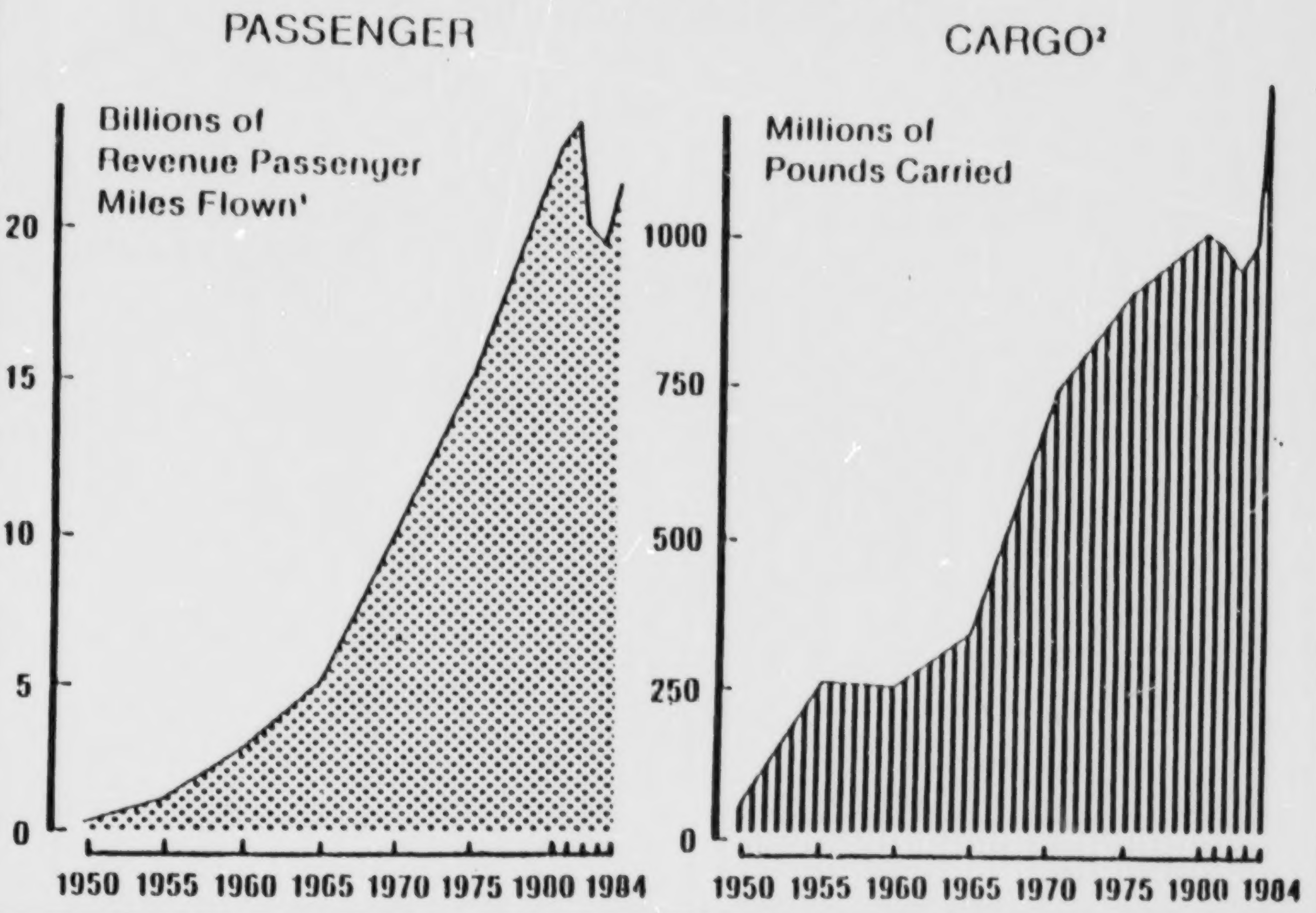
In conclusion, the operating of Abbotsford and Pitt Meadows would probably pose a drain on VIA's operating cash flow, as summarized in the following table:

	1985	1986
Abbotsford	($ 212)	($ 752)
Pitt Meadows	(67)	1,737
	$(269)	$(2,489)

Since cash flow statements are not available for the Langley and Boundary Bay airports, it is difficult to assess the extent to which these airports would affect the position of a local authority.

THE GROWTH OF AIR TRANSPORT

Canadian Scheduled Services



1. Revenue Passenger Mile is one fare-paying passenger carried one mile.

2. In this Briefing, cargo includes freight and mail. *Source: Statistics Canada*

Appendix 3-2

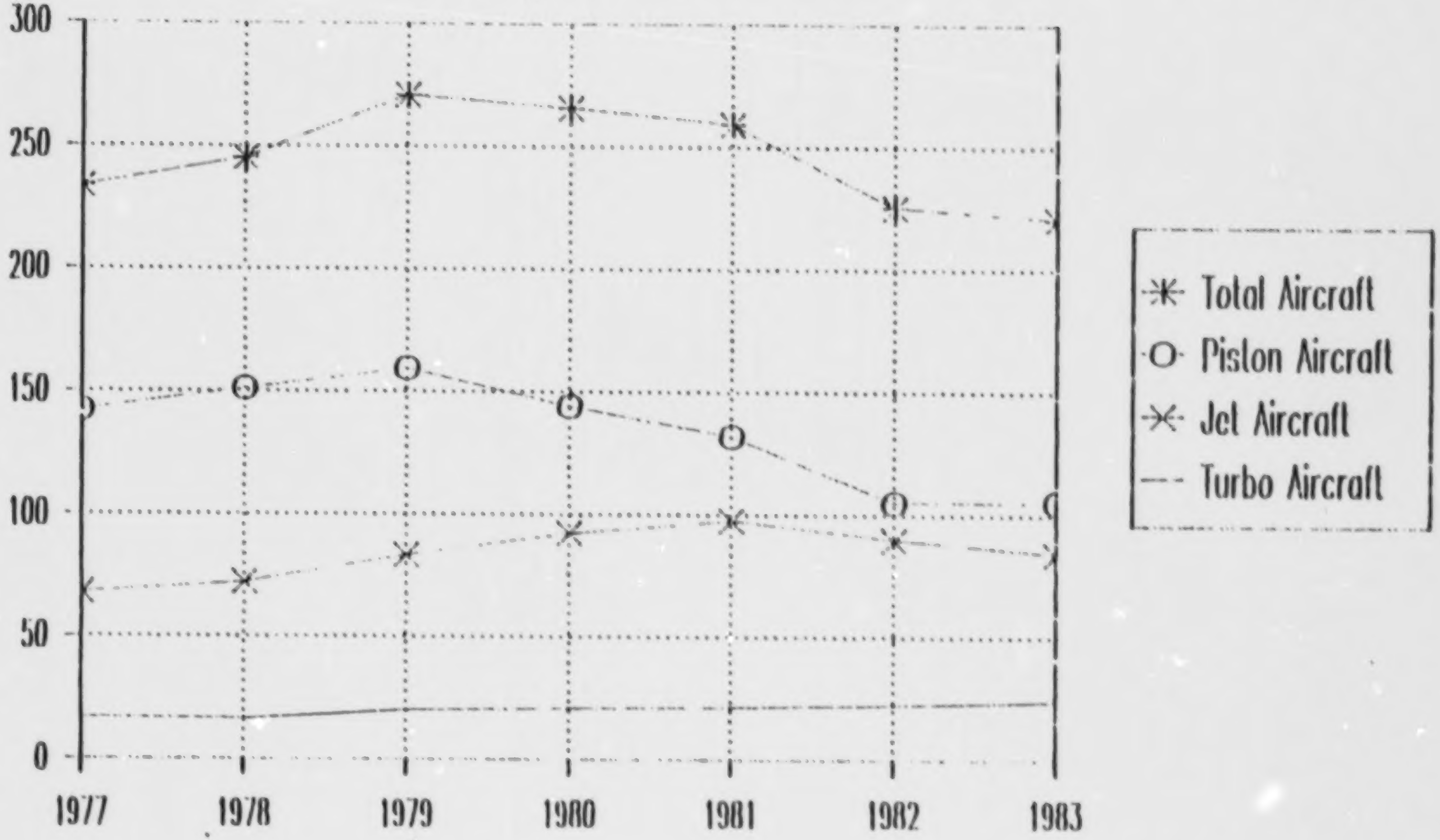
Regional Distribution of International Air Freight

Region of Airline Registration	Regional share of international freight tonne-kilometres 1972 (%)	Average annual growth in freight tonne-kilometres, 1982 (%)	1972-82 (%)
Europe	44.8	38.3	+ 8.7
Asia and Pacific	12.3	28.1	+19.9
North America	29.0	17.8	+ 5.2
Latin America/Caribbean	5.8	6.1	+10.9
Middle East	5.0	5.5	+11.5
Africa	3.1	4.2	+13.9
World	100	100	+10.4

Source: ICAO (1983c).

Appendix 3-3

Aircraft Movements at Vancouver
(thousands)



Source: Statistics Canada

U.S. and Canadian Deregulation Policy

A. U.S. Deregulation Policy

In the early 1970s, intensive non-price competition through service and inflight amenities led air transport analysts to believe that the U.S. airline industry was not workably competitive. Existing regulations were seen as protecting the airlines and not the public interest. Service competition resulted in higher costs which were consequently passed on to travellers in the form of higher fares. Rigid control was seen as causing empty seats, unnecessary aircraft movements, high airline profits, and high fares.

Under President Ford, reform of airline regulation began. The Civil Aeronautics Board (CAB) started to relax economic regulations in 1976 by first authorizing Advanced Booking Charter Fares.[29] One year later discount fares were authorized for scheduled services such as Texas International's "Peanut" fares and American Airlines' "Super Saver" fares. Both were generally set at 50% below coach fares. In August 1978, a zone of fare flexibility was established. In October 1978, the U.S. Congress passed the Airline Deregulation Act (ADA) which phased-out entry and fare regulations over a four year period. Through the gradual elimination of price regulation, the U.S. government believed that the costs associated with immediate deregulation (such as overcapacity, instability, bankruptcies, a decline in services to smaller communities, and safety) would be minimized. It should be noted, however, that the CAB granted almost all route and fare applications irrespective of the provisions of the ADA. On January 1, 1985, the CAB was dissolved and its remaining functions such as consumer protection and international matters were absorbed by the Departments of Transportation and Justice.

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[29] Another agency, the Federal Aviation Administration (FAA), regulates safety, operates navigational aids and controls air traffic. These continue to be strictly regulated.

The ADA provided for the continuance of an unregulated fare zone until December 31, 1982. The purpose of this zone was to avoid exploitation by incumbent carriers who might raise fares or pursue predatory pricing as a result of their market power. Trunk carriers were permitted to reduce fares below the standard industry level by 50% without Board approval and, in addition, these carriers had the authority to raise fares by 5% above the standard level on routes where they served 70% of the market, and by 10% on routes served by four or more carriers. Local carriers were permitted to raise fares by 30% above the standard level from October 1978 to May 1980. Following May 1980, the limits for routes of 200 - 400 miles were set at 50% above the standard level while routes less than 200 miles were no longer subject to an upper fare limit.

Under deregulation, a U.S. carrier no longer had the burden of showing that a proposed service is and will be required by the present and future public convenience and necessity (PCN). Instead a carrier only had to prove itself "fit, willing, and able" to serve a route. Until December 31, 1981, however, market entry was denied if an opponent to the application could prove that the service was not consistent with the PCN clause. The ADA also included four provisions which were designed to provide immediate but limited entry of carriers in certain markets. The most restrictive one, the automatic market entry programme, allowed incumbent carriers to protect one route and apply for one non-stop route authority between one city - pair in 1979, 1980, and 1981. The dormant route authority allowed carriers to serve routes that failed to have a minimum of five round trips per week.

Carriers were given the authority to reduce or terminate services immediately after the passage of the ADA. However, in order to maintain continuous scheduled service on certain routes, carriers were required to file a notice with the Board. Carriers serving monopoly routes had to give 60 days notice while those providing essential air service had to give 90 days notice.[30] In addition, under the Essential Service Programme of the ADA, all communities receiving air service on the date of enactment were guaranteed service for ten years. The government would subsidize carriers on a route-by-route basis for unprofitable but essential air service until October 24, 1988.

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[30] Essential air service is defined as at least two round trips daily, Monday - Friday and a total of two round trips for the remaining two days.

U.S. airline deregulation has brought many important changes to the fundamental restructuring of the air transportation industry. Service has improved for most cities (except for some small communities). Frequency of flights has increased by 28% to 156,000 departures each week. Smaller aircraft offering more flights have replaced larger ones on some routes. The number of jet-served cities fell 20% to 210 as airlines concentrated their jets on serving the large airports. The average airfare dropped by 6% (per revenue passenger mile in constant dollars) and discount travel grew from 39% of the total RPM in 1977 to 81% in 1984. The average discount of the standard economy fare ranged from 30% in 1977 to 51% in 1984.

U.S. air transportation became much more competitive since passage of the ADA. A major realignment of route patterns occurred as hub and spoke networks were adopted by the airlines. Large carriers made cooperative agreements with selected carriers to channel traffic to each other. Many large airlines merged with each other or with smaller airlines. Regional/commuter airlines expanded 131% to carry 26.1 million passengers.

B. Canadian Deregulation Policy

Within Canada, the Federal Government regulates all economic and safety regulations within the air transportation system under the Aeronautics Act and the National Transportation Act. All major airports are operated by the Federal Government. All taxes and fees levied to the carriers and their customers are fixed and collected by the Federal Government. Air traffic control and navigational systems are maintained by the Federal Government as well as fire/crash/rescue operations. Customs and immigration laws are enforced by Federal Government officials and all bilateral agreements which control services to foreign countries and by foreign carriers are negotiated by the Federal Government. One of the two major airlines is even owned by the Federal Government.

Since 1967, economic regulation has been administered by the Canadian Transport Commission, controlling all entry and exit, fares, service, mergers, and acquisitions. However, important changes have occurred in the industry over the past decade, underpinning the necessity for change in the Canadian air transportation industry. One decade ago, only two scheduled (level one carriers) airlines flew nationally. Five other scheduled (level two) airlines were confined to regional territories.[31] Both levels flew charters as well. A third tier of scheduled airlines linked small communities together with the larger airports and several hundred specialized charter airlines operated from selected bases across the country.

There were two reasons for the liberalization of the air transportation industry in Canada. First, the southern markets were near a stage of market maturity and were no longer perceived as vulnerable. Second, travellers and consumer groups began to question why fares on domestic routes were higher than those on U.S. and North Atlantic routes of similar stage length. This fare differential increased after the passage of the U.S. Deregulation Act. Travellers reacted by diverting to U.S. routes that paralleled with Canadian routes and as a result the Federal Government was forced to issue several policy directives to the CTC.[32]

On May 10, 1984, the Minister for Transport announced the New Canadian Air Policy. The policy proposed to liberalize economic regulation in the southern markets. The north was excluded because the Federal Government believed that its markets were too immature and not ready to sustain increased competition.[33]

The New Canadian Air Policy proposed to lower entry barriers by abolishing carrier roles, encouraging carriers to consolidate their unit toll licenses, allowing unlimited entry into charter markets and asking the CTC to give greater weight to benefits of competition when assessing public convenience and necessity. It also proposed to relax exit regulation by granting incumbent carriers faced with new entry the freedom to exit on 60 days notice. The Minister issued this policy directive with the hope that the CTC would respect the proposals. With a federal election approaching, there was no time to introduce the legislation in the House of Commons to amend Part II of the Aeronautics Act.

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[31] PWA (B.C., Alberta, and the North), Transair (in the Prairies and Northwest Ontario), Nordair (in Ontario and Quebec), Quebec Air (in Quebec and Montreal), and Eastern Provincial Airways (in the Atlantic).

[32] The Consumers Association of Canada determined that by 1984, 11% of Canadian air travellers were originating their trips at U.S. airports.

[33] Section 13 defines the north as "north of the 50th parallel from the Atlantic to the Ontario/Manitoba border, North of the diagonal line from the point to the intersection of the 55th parallel and the Manitoba/Saskatchewan border and north of the 55th parallel to the Pacific."

In July 1985, the Minister of Transport for the newly elected Progressive Conservative Party, Don Mazankowski, released Freedom to Move: A Framework for Transportation Reform. This discussion paper proposed to eliminate entry, exit, and fare regulation in the domestic airline industry. The Minister planned to implement the policy making amendments to the Aeronautics Act and the National Transportation Act.

On June 26, 1987, Bill C-126, a new National Transportation Act, was introduced. On November 4, 1986, the legislation was re-tabled as Bill C-18 by the new Minister for Transportation, John Crosbie. These bills implemented the air transportation proposals in the Freedom to Move paper. The CTC will also be replaced by a much smaller regulatory body called the National Transportation Agency.

Bill C-18 was passed by both the House and Senate in August, 1987 and given royal assent. It will be proclaimed law on January 1, 1988.

Recent Updates in Bilateral Air Transportation Negotiations Between Canada and the United States

For the past eight years, the Canadian and the U.S. governments have held negotiations for the purpose of revising route schedules and concluding a bilateral air agreement. Unfortunately, the success of the negotiations is questionable. The two governments have agreed on the interpretation of the "reasonable proximity" clause in the existing agreement, concluded a new agreement on regional, local, and commuter services and established experimental transborder programmes at Mirabel and San Jose airports. Nevertheless, scheduled transborder air services are still governed by the Air Transportation Agreement of 1966 and formal negotiations have been deferred indefinitely. In principal, both governments support the freer movement of transborder air services but they are committed to different objectives.

On June 13, 1985 concept papers were exchanged between Prime Minister Brian Mulroney and President Ronald Reagan in preparation for negotiation of an open transborder system governed by market forces. However, different approaches were presented each with its own set of objectives. The Canadian government envisions a common market allowing carriers to operate services between Canada and the United States as well as to allow the free movement of factors of production. Canadian carriers could serve intra-American traffic and vice versa, thereby minimizing the structural advantage of U.S. airlines and providing equal opportunity for airlines in both countries. Canada proposed a five-stage approach:

- The governments would exchange high priority routes

- Introduce innovations such as additional traffic stops, cabotage rights, the use of co-terminal or multiple terminal routes, and the temporary use of capacity and frequency controls on high density routes.

- Implement an automatic route selection system

- Extend transborder services beyond destination terminals to select cities with cabotage rights

- Fully integrate the two countries' air transportation systems.

The U.S. concept paper proposed that a free trade market should be established in which carriers would be permitted to operate services between any point in Canada and the United States. In addition, carriers would be able to co-terminalize points, and provisions would be made to enhance the opportunities for multiple combination service designations[34]. In order to offset the structural advantage of its national airlines, the U.S. government would consider certain enhancements which could include stopover rights and change of gauge operations in the foreign country. The latter would allow an airline to use aircraft on one section of the route which is different in capacity from that used on another section of the route.

Unlike the Canadian concept paper, pricing and non-scheduled services were addressed by the U.S. Under the existing double approval pricing regime, schedules airlines are able to change fares or respond to changes freely and quickly. As a result, the U.S. noted it would be interested in double disapproval pricing and continue discussions on zone pricing but would prefer an arrangement with fewer conditions and less complex methods of determining reference fares. With regards to non-scheduled services, the U.S. government stated that the present method of payment must be updated to provide a more open operating environment for existing and potential services. In addition, charter services which operate in a regular pattern should be converted to schedule authority.

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[34] Under multiple combination service designation, carriers could serve any combinations of points in both countries.

Later during the same year, Canadian and U.S. officials met to discuss the concept papers. Serious doubts and concerns were raised and in September, 1985 a revised Canadian approach similar to that of the U.S. concept paper was submitted in light of these meetings.

The latest developments to 1987 are not very encouraging. Although formal negotiations for a new air transport agreement have been deferred indefinitely, the Canadian and U.S. governments signed an agreement on aviation security on November 21, 1986. Essentially, the two governments agreed to provide assistance to each other in order to prevent unlawful acts of seizure of civil aircraft. Unfortunately the U.S. government is not in a position to proceed with the negotiations based on the Canadian air transport proposals towards an open and competitive transborder aviation system and Canada does not have the political or economic power to force U.S. cooperation.

Appendix. 3-6

Canadian Air Transport Bilateral Agreements

On January 1, 1987, the following air transport agreements were in force between Canada and other countries:[35]

Air Transport Agreements Between Canada and Other Countries

- Australia (1946, modified in 1951 and 1974);
- Belgium (1949, modified in 1956);
- People's Republic of China (1973);
- Cuba (1975);[36]
- Czechoslovakia (1968);
- Denmark (1949, modified in 1958);
- Fiji (1974);
- Finland (1977);
- France (1975, replacing the agreement of 1950 as modified);
- Germany (Federal Republic) (1973, replacing the agreement of 1965 as modified);
- Greece (1974);
- Ireland (1947, modified in 1948, 1951, and 1957);
- Israel (1971, modified in 1976);
- Italy (1966, modified in 1972);
- Jamaica (1970);
- Japan (1955);
- Mexico (1961, modified in 1971, replacing the agreement of 1953 as modified);
- Morocco (1975);
- Netherlands (1974, replacing the agreement of 1948);
- Norway (1950, modified in 1958);
- Peru (1954, modified in 1957);
- Poland (1976);
- Portugal (1947, modified in 1957 and 1958);
- Sweden (1947, modified in 1949, 1954 and 1958);
- Switzerland (1975, replacing the agreement of 1958);
- Trinidad and Tobago (1970);

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[35] Air transport agreements between Canada and other countries, which are no longer in force or which have never come into force, have been excluded. In 1960, an air transport agreement was signed and entered into force between Canada and Pakistan. No air services are performed under the agreement. In the future the agreement could conceivably be used as a link in the chain of the bilateral air transport agreements, needed to give (a) Canadian carrier(s) round-the-world route.

[36] There is also a 1973 agreement between Canada and Cuba on the return of hijackers.

- U.K. (1949, modified in 1958 and 1960, replacing the agreement of 1945 as modified);
- U.S.A. (1966, modified in 1974, replacing the agreements of 1928, 1938, 1945, 1949 as modified);
- U.S.S.R. (1966, modified in 1967 and 1973)

Between January 1978 and April 1986, Canada signed thirteen new bilateral air agreements which are presented in the table below.

New Canadian Bilateral Air Agreements

January 1978 - April 1986[37]

Date In Force	Country	Designation per Route	Preferable Means of Rate Setting
Oct 12 1978	Haiti	Single	IATA
May 08 1979	Argentina	Single	IATA
Aug 31 1982	India	Single	IATA
Jan 06 1984	St.Lucia	Multiple	Airline Agreement
June 12 1984	Singapore	Single	IATA
Aug 20 1984	Greece	Single	IATA
Nov 09 1984	Romania	Single	IATA
Nov 16 1984	Yugoslavia	Multiple	IATA
Sept 04 1985	New Zealand	Multiple	IATA
Oct 18 1985	Barbados	Single	Airline Agreement
Oct 18 1985	Jamaica	Multiple	IATA
Oct 18 1985	St.Christopher and Nevis	Multiple	Airline Agreement
Apr 13 1986	Israel	Single	IATA

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[37] Source: Policy Choices for Canada in International Air Transport; Dresner and Tretheway, June 1987.

Appendix 3-7

Trends in Air Cargo Transportation in 1986
(Ranked by Growth in Traffic)
By Route Area

Rank	Route Area	Tonne-kilometres Performed Change over 1985 %
1	Within Far East	+ 24.0
2	Europe-Far East (except Polar Routes)	+ 21.7
3	North America-South America	+ 19.3
4	South Atlantic	+ 18.7
5	North and mid Pacific	+ 17.0
6	Europe-Far East (including Polar Routes)	+ 10.7
7	South Pacific	+ 8.8
8	Europe-Southwest Pacific	+ 8.6
9	Middle-Far East	+ 8.5
10	Far East-Southwest Pacific	+ 8.4

Source: IATA, World Air Transport Statistics 1986, p. 28.

Appendix 3-8

Regional Trends in Growth of Freight, 1987
(Ranked by Size of Market)

Route Area	Rank	Millions of Tonne-Kilometers Performed	Change from 1985 %
North Atlantic	1	7,495	+ 4.5
North and Mid Pacific	2	3,785	+ 17.0
Europe-Far East (not Including Polar Routes)	3	3,037	+ 21.7
Europe-Far East (including Polar Routes)	4	1,539	+ 10.7
Europe-Southern Africa	5	1,365	- 6.2
Europe-Middle East	6	1,277	- 0.9
North-South America	7	931	+ 5.3
South Atlantic	8	829	+ 18.7
Europe-Southwest Pacific	9	809	+ 8.6
Within Europe	10	710	+ 6.8
Europe-Northern Africa	11	652	- 7.3
Mid Atlantic	12	581	+ 8.0
South Pacific	13	574	+ 8.8
Within Far East	14	568	+ 24.0
Middle-Far East	15	519	+ 8.5
Far East-Southwest Pacific	16	394	+ 8.4
North America	17	186	+ 19.3
Within Middle East	18	175	- 1.8
Within Southwest Pacific	19	158	+ 4.6
Within North America	20	98	- 8.4
Within South America	21	66	+ 4.5
Within Africa	22	37	- 3.6
Africa-Middle East	23	36	- 8.1
Africa-Far East	24	29	- 31.3
Central-South America	25	26	- 2.5
Africa-Southwest Pacific	13	13	- 11.7

Source: IATA, World Air Transport Statistics, 1986, #31, p. 28.

Appendix 3.9
Worldwide Revenue Tonne Kilometers
Worldwide, 1986

Route Area	% Share
North Atlantic	21.4
Europe-Far East	10.3
North-Mid Pacific	7.9
Within Europe	6.4
Europe-Middle East	4.1
Europe-Southern Africa	3.5
Other route areas	25.9
World Total	100.0

Share for IATA members only

Source: IATA, World Air Transport Statistics 1986, #31, pp. 9.

Appendix 3.10

Trends in Air Passenger Transportation in 1986
(Ranked by Growth in Traffic)
By Route Area

Rank	Route Area	Passenger Kilometres Flown Change over 1985
1	South Atlantic	+ 21.7
2	North-Central America	+ 19.6
3	North-South America	+ 19.1
4	Central-South America	+ 19.0
5	South Pacific	+ 13.2
6	Far East-South Pacific	+ 12.3
7	Within South America	+ 11.7
8	Within North America	+ 9.8
9	North-Mid Pacific	+ 8.7
10	Europe-Southwest Pacific	+ 8.5

Source: IATA, World Air Transport Statistics 1986, p. 28

Appendix 3.11

Regional Trends in Growth of Passenger Traffic, 1986
(Ranked by Size of Market)

Route Area	Rank	Millions of Passenger Kilometers Flown	Change from 1985 %
North Atlantic	1	120,804	- 8.8
Within Europe	2	54,839	-
Europe-Far East (not incl. Polar Routes)	3	35,107	+ 7.4
North-Mid Pacific	4	32,860	+ 8.7
Europe-Middle East	5	25,139	- 5.2
North-Central America	6	21,045	+ 19.6
Europe-Africa	7	18,235	- 4.4
Europe-Southwest Pacific	8	18,013	+ 8.5
Middle East-Far East	9	16,518	- 0.8
South Atlantic	10	14,720	+ 21.7
South Pacific	11	14,559	+ 13.2
North-South America	12	13,915	+ 19.1
Europe-Far East (Polar Routes)	13	12,610	- 3.7
Mid Atlantic	14	11,637	+ 1.1
Far East-Southwest Pacific	15	11,346	+ 12.3
Within Far East	16	11,305	+ 7.4
Europe-North Africa	17	10,805	- 7.5
Within North America	18	7,207	+ 9.8
Within Middle East	19	7,172	- 8.2
Within Southwest Pacific	20	4,792	+ 8.2
Within South America	21	2,944	+ 11.7
Within Africa	22	2,215	- 1.7
Africa-Middle East	23	1,622	- 4.6
Africa-Far East	24	1,403	- 20.8
Central-South America	25	1,373	+ 19.0
Within Central America	26	854	- 0.7
Africa-Southwest Pacific	27	450	- 16.9

Source: IATA, World Air Transport Statistics 1986, #31, p. 28.

Appendix 3.12
International Cargo Routing Through North American Airports, 1975-1985
(000 tonnes)

	JFK	Miami	LAX	Chicago	SFran	Toronto	Dallas	Vanc	SeaTac
1985	800.7	396.9	252.9	214.1	166.6	113.7	28.5	25.5	N/A
1984	859.8	355.9	256.2	228.9	142.5	106.6	25.5	26.1	N/A
1983	765.8	361.4	248.2	218.9	N/A	84.3	22.6	23.8	N/A
1982	755.9	391.4	213.5	146.5	N/A	79.5	20.0	19.6	N/A
1981	766.1	406.4	208.4	137.9	N/A	34.6	23.5	20.8	N/A
1980	741.3	391.9	193.1	131.6	N/A	88.6	20.7	22.5	N/A
1979	756.3	361.0	176.1	139.8	N/A	95.7	9.5	19.0	N/A
1978	746.5	374.9	157.4	113.0	N/A	88.2	N/A	18.7	N/A
1977	678.7	374.2	138.9	138.9	N/A	83.3	N/A	17.6	N/A
1976	639.2	296.2	134.2	120.7	N/A	75.0	N/A	20.6	N/A
1975	537.9	267.1	117.7	105.6	N/A	65.1	N/A	15.9	N/A
1975-85	49%	49%	115%	103%	---	75%	---	60%	---
1980-85	8%	1%	31%	63%	---	28%	38%	13%	---

Notes:

1. Some data is estimated.
2. Cargo = Freight + Mail.

Source: ICAO Digest of Statistics Nos. 246, 295, 327.

Additional data in: Figure A-1 International Freight Movements in 1985 at Vancouver and U.S. Airports; and Figure A-2 International Freight Movements in 1985 at Vancouver and Non-North American Airports.

Appendix 3.13

North American Airports
Total Cargo 1975-1985
(000 tonnes)

	JFK	LAX	Chicago	Miami	SFran	Dallas	Toronto	Vanc	SeaTac
1985	1104.6	842.8	736.4	562.1	447.1	390.6	273.4	102.5	208.2
1984	1258.4	848.2	800.3	519.3	497.0	377.3	266.1	99.3	230.7
1983	1164.2	820.6	816.2	546.3	429.2	334.1	231.0	92.6	216.7
1982	1126.0	778.0	719.2	566.8	389.5	294.5	214.3	84.3	198.7
1981	1206.0	815.5	748.2	594.1	423.0	306.2	213.0	84.7	209.9
1980	1185.8	800.1	751.4	569.0	421.4	286.1	216.1	85.4	212.1
1979	1226.9	874.0	781.2	521.4	440.5	263.9	216.4	81.2	211.3
1978	1255.8	808.2	856.3	537.0	494.8	N/A	199.6	76.8	N/A
1977	1150.0	736.9	916.9	528.9	426.5	N/A	188.3	74.4	N/A
1976	1062.4	693.5	827.0	438.5	396.9	N/A	179.3	78.7	N/A
1975	1004.6	715.0	764.1	406.8	417.7	N/A	158.2	67.3	N/A
1975-85	10%	18%	-4%	38%	7%	---	73%	52%	---
1980-85	-7%	5%	-2%	-1%	6%	37%	26%	20%	-2%

Notes:
1. Some data are estimated.
2. Cargo = Freight + Mail.

Source: ICAO Digest of Statistics Nos. 246,295,327.

Additional data in: Figure A-3 Total Freight Movements in 1985 at Vancouver and U.S. Airports; and Figure A-4 Total Freight Movements at Vancouver and Non-North American Airports.

Appendix 3.14

Growth of Freight
Vancouver International Airport
1975-1985

Year	International Freight	Change (tonnes)	Total Freight	Change
1974	13.0		56.6	
1975	15.9	2.9	67.3	10.7
1976	20.6	5.7	78.7	11.4
1977	17.6	-3.0	74.4	-4.3
1978	18.7	1.1	76.8	2.4
1979	19.0	.3	81.2	4.4
1980	22.5	3.5	85.4	4.2
1981	20.8	-1.7	84.7	-0.7
1982	19.6	-1.2	84.3	-0.4
1983	23.8	4.2	92.6	8.3
1984	26.1	2.3	99.3	6.7
1985	25.5	-0.6	102.5	3.2

The international average change over 1980-1985 is +1.08
The total average change over the period 1980-1985 is +3.55

Source: ICAO *Digest of Statistics*, No. 5, 246, 295, 327.

Appendix 3.15

Freight Traffic by Origin - Destination Routes, 1986

City Origin	Rank	Freight Inbound	Tonnes	Rank	Freight Outbound	Tonnes
Vancouver	1	Tokyo	2,613.45	1	London	3,859.08
	2	Hong Kong	2,084.14	2	Tokyo	2,494.64
	3	Amsterdam	1,665.68	3	Amsterdam	2,144.63
	4	London	1,498.21	4	Frankfurt	1,687.03
	5	Honolulu	1,478.11	5	Los Angeles	1,625.58
	6	Los Angeles	1,444.01	6	San Francisco	936.33
	7	San Francisco	1,128.32	7	Hong Kong	877.66
	8	Frankfurt	1,181.62	8	Sydney	689.29
	9	Sydney	911.20	9	Honolulu	683.40
	10	Chicago	681.88	10	Chicago	313.93
	11	Auckland	505.15	11	New York	258.72
	12	Nandi	502.94	12	Auckland	177.26
	13	New York	207.70	13	Nandi	15.89
Toronto	1	Frankfurt	9,107.04	1	London	5,715.01
	2	London	8,926.41	2	Frankfurt	5,088.64
	3	Amsterdam	7,507.60	3	Amsterdam	4,746.09
	4	Chicago	5,754.91	4	Paris	4,407.56
	5	Zurich	5,665.75	5	Los Angeles	2,967.77
	6	Los Angeles	5,088.94	6	Chicago	2,699.13
	7	New York	4,156.03	7	Zurich	2,042.20
	8	Paris	4,007.03	8	New York	1,202.14
	9	San Francisco	2,426.84	9	Milan	1,149.29
	10	Rome	1,667.74	10	Miami	781.67
	11	Brussels	1,551.45	11	San Francisco	658.18
	12	Dusseldorf	1,527.82	12	Dusseldorf	618.73
	13	Dallas	1,493.09	13	Dallas	402.78
	14	Honolulu	1,478.11	14	Tampa	398.31
	15	Miami	1,363.42	15	Rome	355.07
	16	Milan	1,013.38	16	Geneva	147.98
	17	Tampa	591.43	17	Montego Bay	61.16
	18	Geneva	166.98	18	Honolulu	23.17
Montreal	1	Paris	13,604.72	1	Paris	8,922.98
	2	Amsterdam	4,653.77	2	Los Angeles	1,926.92
	3	Zurich	3,891.78	3	London	1,759.73
	4	London	3,860.47	4	Amsterdam	1,444.12
	5	Chicago	2,432.21	5	Miami	678.64
	6	New York	2,175.66	6	Zurich	667.71
	7	Brussels	2,146.06	7	New York	666.15
	8	Los Angeles	1,633.28	8	Brussels	475.20
	9	Rome	1,345.43	9	San Francisco	403.69
	10	Miami	968.15	10	Chicago	382.49
	11	Milan	595.47	11	Detroit	305.89
	12	Detroit	495.60	12	Rome	208.09

City Origin	Rank	Freight Inbound	Tonnes	Rank	Freight Outbound	Tonnes
Montreal (Cont.)	13	San Francisco	299.56	13	Geneva	190.49
	14	Rio de Janeiro	173.08	14	Milan	102.09
	15	Tampa	168.87	15	Rio de Janeiro	68.25
	16	Geneva	103.97	16	Tampa	67.27
San Francisco	1	Tokyo	53,059.18	1	Tokyo	24,479.56
	2	Frankfurt	4,842.35	2	London	5,036.06
	3	Hong Kong	4,389.60	3	Frankfurt	4,749.67
	4	London	4,024.98	4	Singapore	3,265.45
	5	Singapore	3,509.24	5	Toronto	2,826.18
	6	Manila	2,555.16	6	Hong Kong	2,823.21
	7	Sydney	2,428.63	7	Sydney	2,231.13
	8	Melbourne	1,836.39	8	Vancouver	1,197.47
	9	Vancouver	951.46	9	Montreal	1,115.26
	10	Toronto	527.37	10	Manila	919.43
	11	Montreal	299.56	11	Melbourne	636.07
	12	Nandi	145.24	12	Guadalajara	582.16
	13	Calgary	54.18	13	Calgary	344.14
	14	Edmonton	22.78	14	Edmonton	192.46
	15	San Jose Cabo	.30	15	Paris	11.85
	16	Guadalajara	--	16	Nandi	7.55
	17	Paris	--	17	San Jose Cabo	1.61
Dallas	1	Toronto	8,926.41	1	Frankfurt	5,085.41
	2	Frankfurt	5,348.10	2	London	4,111.73
	3	London	4,724.93	3	Mexico City	2,154.33
	4	Tokyo	1,550.03	4	Toronto	1,495.99
	5	Mexico City	829.45	5	Tokyo	806.49
	6	Guadalajara	200.43	6	Guadalajara	380.44
	7	Cancun	27.20	7	Montreal	185.51
	8	Puerto Vallarta	26.58	8	Monterrey	116.05
	9	Acapulco	19.88	9	Acapulco	48.67
	10	Montreal	--	10	Cancun	46.92
	11	Monterrey	--	11	Puerto Vallarta	45.13
Los Angeles	1	Tokyo	57,502.60	1	Tokyo	17,949.53
	2	Taipei	55,357.29	2	Seoul	12,844.97
	3	Seoul	31,702.63	3	London	11,290.03
	4	Frankfurt	10,283.94	4	Frankfurt	11,039.56
	5	London	8,940.27	5	Paris	9,525.62
	6	Paris	8,724.12	6	Sydney	6,434.20
	7	Hong Kong	7,902.73	7	Toronto	5,228.08
	8	Auckland	7,205.51	8	Auckland	4,630.99
	9	Amsterdam	4,319.43	9	Amsterdam	4,533.59

City Origin	Rank	Freight Inbound	Tonnes	Rank	Freight Outbound	Tonnes
Los Angeles (Cont.)	10	Singapore	3,778.07	10	Mexico City	3,427.08
	11	Sydney	3,165.30	11	Singapore	3,298.22
	12	Mexico City	3,132.01	12	Melbourne	3,041.36
	13	Toronto	2,715.88	13	Milan	2,515.80
	14	Melbourne	2,356.07	14	Papeete	1,748.32
	15	Montreal	1,705.90	15	Rome	1,915.76
	16	Rio de Janeiro	1,930.74	16	Montreal	1,607.95
	17	Vancouver	1,602.43	17	Vancouver	1,491.67
	18	Milan	1,420.98	18	Rio de Janeiro	1,390.88
	19	Manila	1,107.09	19	Guadlajara	1,109.85
	20	Rome	964.72	20	Calgary	1,025.96
	21	Lima	832.33	21	Buenos Aires	570.26
	22	Guatemala City	684.27	22	Panama/Balboa	414.19
	23	San Jose	678.18	23	Taipei	410.07
	24	Guadalajara	597.84	24	Manila	389.39
	25	San Salvador	576.59	25	Edmonton	306.41
	26	Buenos Aires	396.20	26	San Salvador	283.67
	27	Nandi	316.03	27	Mazatlan	251.64
	28	Papeete, Tahiti	240.60	28	Lima	225.75
	29	Edmonton	178.41	29	Hong Kong	205.66
	30	Calgary	164.31	30	San Jose Cabo	150.21
	31	Panama/Balboa	120.91	31	Guatemala City	126.55
	32	Bogota	110.47	32	San Jose	104.75
	33	Mazatlan	104.74	33	Bogota	89.16
	34	Santaigo	55.73	34	Nandi	84.96
	35	San Jose Cabo	28.16	35	Acapulco	72.93
	36	Acapulco	22.89	36	Puerto Vallarta	58.63
	37	Puerto Vallarta	12.29	37	Zihuatanejo	23.83
	38	Zihuatanejo	2.50	38	Sao Paulo	8.78
Miami	1	Bogota	47,291.25	1	Bogota	23,673.88
	2	Caracus	10,295.49	2	Caracus	12,173.48
	3	Maracaibo	8,876.32	3	Cali	12,032.59
	4	London	6,809.86	4	Fort de France	10,737.00
	5	Rio de Janeriro	6,738.57	5	Lima	8,483.00
	6	San Jose	6,293.29	6	Rio de Janeiro	5,714.88
	7	Guatemala City	5,249.29	7	Pointe-a-Pitre	5,434.00
	8	Santiago	4,420.76	8	Manaus	4,969.00
	9	Santo Domingo	3,811.57	9	Buenos Aires	4,371.70
	10	Panama/Balboa	3,518.69	10	Santiago	4,057.33
	11	Frankfurt	2,888.07	11	Barranquilla	3,767.30
	12	Madrid	2,693.44	12	London	3,581.31
	13	Kingston	2,680.58	13	Mexico City	3,404.64
	14	Guayaquil	2,261.35	14	San Jose	3,272.20
	15	Mexico City	2,154.58	15	Guatemala City	2,867.91

City Origin	Rank	Freight Inbound	Tonnes	Rank	Freight Outbound	Tonnes
Miami (Cont.)	16	Sao Paulo	2,061.11	16	Quito	2,637.68
	17	Quito	1,859.54	17	Kingston	2,594.06
	18	Port au Prince	1,631.18	18	Panama/Balboa	2,323.46
	19	Buenos Aires	1,221.54	19	Frankfurt	2,160.04
	20	Cali	992.92	20	Montego Bay	1,919.65
	21	Montego Bay	987.26	21	Guayaquil	1,729.97
	22	Toronto	724.99	22	Santo Domingo	1,655.04
	23	Montreal	611.24	23	Nassau	1,568.55
	24	Paris	583.53	24	Toronto	1,398.50
	25	Lima	579.93	25	Sao Paulo	1,295.37
	26	Barranqilla	560.45	26	Montreal	1,025.45
	27	Belize	383.42	27	Maracaibo	993.45
	28	Manaus	344.63	28	Madrid	980.26
	29	Pointe-a-Pitre	180.04	29	Port au Prince	633.11
	30	La Paz, Bol	127.12	30	Belize	517.51
	31	Nassau	119.07	31	Paris	364.66
	32	Freeport	35.69	32	Freeport	320.44
	33	Fort de France	13.11	33	La Paz, Bol	212.69
New York	1	Tokyo	69,752.59	1	London	36,101.90
	2	Paris	61,400.62	2	Frankfurt	30,403.99
	3	Frankfurt	53,570.48	3	Paris	24,123.86
	4	London	44,094.77	4	Tokyo	24,098.73
	5	Amsterdam	24,479.77	5	Amsterdam	18,075.98
	6	Brussels	20,163.07	6	Seoul	10,826.32
	7	Rome	19,386.59	7	Brussels	9,943.03
	8	Milan	18,583.23	8	Rome	8,885.28
	9	Zurich	15,108.11	9	Madrid	7,478.86
	10	Madrid	11,006.34	10	Milan	7,434.96
	11	Rio de Janeiro	10,018.52	11	Rio de Janeiro	6,131.51
	12	San Paulo	8,919.59	12	Copenhagen	6,030.69
	13	Copenhagen	7,427.06	13	Sao Paulo	5,726.36
	14	Seoul	6,466.66	14	Zurich	4,856.79
	15	Caracus	6,372.82	15	Toronto	4,058.72
	16	Oslo	5,537.34	16	Caracus	3,326.35
	17	Stockholm	4,457.96	17	Bombay	3,264.31
	18	Bombay	4,272.26	18	Buenos Aires	2,973.41
	19	Kingston	4,036.15	19	Stockholm	2,820.17
	20	Munich	3,691.29	20	Munich	2,700.55
	21	Shannon	3,658.15	21	Mexico City	2,390.84
	22	Geneva	3,283.58	22	Montreal	2,080.02
	23	Athens	3,115.61	23	Shannon	1,812.29
	24	Kuwait	2,433.41	24	Oslo	1,652.60
	25	Mexico City	2,396.47	25	Santiago	1.580.92
	26	Karachi	2,382.41	26	Kuwait	1,389.90
	27	Delhi	2,238.45	27	Bombay	1,357.67
	28	Buenos Aires	2,077.66	28	Kingston	1,211.64

City Origin	Rank	Freight Inbound	Tonnes	Rank	Freight Outbound	Tonnes
New York (Cont.)	29	Guayaquil	1,183.03	29	Santo Domingo	1,083.78
	30	Hamburg	1,124.38	30	Athens	970.99
	31	Toronto	1,062.80	31	Karachi	932.64
	32	Vienna	1,023.47	32	Guayaquil	850.45
	33	Cairo	654.31	33	Bogata	820.63
	34	Bogata	602.70	34	Dakar	796.77
	35	Montreal	588.23	35	Delhi	757.65
	36	Barcelona	563.03	36	Belgrade	706.95
	37	Montevideo	554.20	37	Montego Bay	530.61
	38	Dharan	466.63	38	Vienna	520.37
	39	Quito	465.80	39	Nassau	507.33
	40	Cancun	422.68	40	Panama/Balboa	496.91
	41	Dakar	313.19	41	Hamburg	469.24
	42	Stuttgart	294.37	42	Dubai	431.60
	43	Vancouver	227.7	43	Barcelona	431.14
	44	Panama/Balboa	205.13	44	Acapulco	427.08
	45	Istanbul	187.3	45	Stuttgart	358.71
	46	Warsaw	117.48	46	Quito	320.50
	47	Santiago	44.95	47	Dharan	259.52
	48	Acapulco	42.07	48	Vancouver	251.15
	49	Nassau	34.51	49	Ottawa	164.48
	50	Nuremberg	9.05	50	Zagreb	86.65
	51	Freeport	3.48	51	Montevideo	75.10
	52	Dubai	2.79	52	Cancun	59.88
	53	Cali	2.00	53	Acapulco	36.38
	54	Zagreb	--	54	Warsaw	31.64
	55	Dubrovnik	--	55	Puerto Vallarta	27.13
	56	Ottawa	--	56	Cali	24.98
				57	Freeport	8.51
				58	Nuremberg	2.84
				59	Dubrovnik	0.96
Chicago	1	Tokyo	35,737.05	1	Tokyo	15,872.95
	2	Frankfurt	14,960.94	2	Paris	15,029.19
	3	Amsterdam	12,725.94	3	Frankfurt	12,260.86
	4	Paris	12,317.82	4	Amsterdam	9,711.81
	5	London	9,627.32	5	London	9,116.78
	6	Brussels	2,155.48	6	Toronto	6,510.58
	7	Toronto	2,071.00	7	Brussels	3,504.29
	8	Milan	1,037.70	8	Montreal	2,569.93
	9	Mexico City	660.06	9	Milan	2,053.07
	10	Rome	608.05	10	Mexico City	2,017.59
	11	Manila	478.77	11	Rome	885.15
	12	Montreal	369.32	12	Vancouver	785.18
	13	Vancouver	190.08	13	Winnipeg	589.45
	14	Guadalajara	68.10	14	Calgary	543.41

City Origin	Rank	Freight Inbound	Tonnes	Rank	Freight Outbound	Tonnes
Chicago (Cont.)	15	Munich	59.21	15	Manila	518.21
	16	Winnipeg	47.57	16	Edmonton	265.03
	17	Edmonton	42.04	17	Guadalajara	172.82
	18	Acapulco	24.00	18	Munich	168.94
	19	Cancun	2.20	19	Cancun	23.58
	20	Puerto Vallarta	1.00	20	Acapulco	18.40
	21	Calgary	--	21	Puerto Vallarta	3.64
Lima	1	Bogota	3,046.27	1	Bogota	3,335.76
	2	Sao Paulo	2,006.21	2	Los Angeles	832.33
	3	Miami	1,606.36	3	La Paz, Bol	709.99
	4	Rio De Janeiro	688.91	4	Caracus	661.50
	5	Buenos Aires	674.34	5	Rio de Janeiro	611.32
	6	Santiago	637.50	6	Miami	579.93
	7	Caracus	579.05	7	Panama/Balboa	535.75
	8	La Paz, Bol	397.49	8	Quito	531.82
	9	Havana	351.75	9	San Juan, Pr	310.21
	10	Quito	339.19	10	Buenos Aires	289.25
	11	Mexico City	295.13	11	Guayaquil	270.03
	12	Panama/Balboa	291.45	12	Santiago	222.31
	13	Los Angeles	215.85	13	Mexico City	166.02
	14	San Juan, Pr	211.95	14	Sao Paulo	153.40
	15	Guayaquil	73.45	15	Santa Cruz, Bol	49.05
	16	Santa Cruz, Bol	--	16	Havana	14.35
Buenos Aires:						
	1	Miami	4,270.93	1	Sao Paulo	2,562.00
	2	Santiago	3,410.34	2	Santiago	2,253.07
	3	New York	3,198.66	3	Rio de Janeiro	2,214.81
	4	Sao Paulo	2,937.58	4	New York	2,077.66
	5	Madrid	2,764.36	5	Rome	1,638.85
	6	Rio de Janeiro	2,483.51	6	Miami	1,122.54
	7	Frankfurt	2,090.44	7	Paris	1,200.51
	8	Paris	1,614.64	8	Montevideo	1,037.12
	9	Rome	1,292.65	9	Caracus	961.00
	10	Zurich	722.90	10	Frankfurt	879.33
	11	Montevideo	615.18	11	Madrid	790.31
	12	Los Angeles	530.11	12	Zurich	732.23
	13	Mexico City	452.84	13	Lima	674.34
	14	Lima	289.25	14	Bogota	486.69
	15	Amsterdam	250.39	15	Los Angeles	396.20
	16	Caracas	240.33	16	Mexico City	338.67
	17	Bogota	132.85	17	Santa Cruz, Bol	174.22
	18	Porto Allegre	132.17	18	La Paz, Bol	163.41
	19	Guayaquil	112.48	19	Guayaquil	152.34

City Origin	Rank	Freight Inbound	Tonnes	Rank	Freight Outbound	Tonnes
Buenos Aires (Cont.)	20	Asuncion	37.81	20	Asuncion	147.10
	21	Santa Cruz, Bol	28.09	21	Amsterdam	120.64
	22	La Paz, Bol	23.59	22	Milan	95.05
	23	Punta del Este	9.96	23	Porto Allegre	45.47
	24	Lisbon	1.04	24	Punta del Este	17.10
	25	Milan	--	25	Lisbon	1.18
	26	Colonia, Uru	--	26	Colonia, Uru	0.83
Tokyo	1	Hong Kong	56,171.24	1	New York	65,533.00
	2	Taipei	55,397.29	2	Los Angeles	64,760.43
	3	Seoul	34,150.78	3	San Francisco	50,209.76
	4	Chicago	18,213.00	4	Hong Kong	32,942.41
	5	Los Angeles	17,835.65	5	Chicago	30,758.64
	6	Frankfurt	16,927.44	6	Seoul	27,714.13
	7	Singapore	12,452.76	7	Taipei	25,757.77
	8	London	10,389.63	8	Singapore	19,598.79
	9	Anchorage	9,593.60	9	Frankfurt	16,773.35
	10	Sydney	5,880.04	10	Paris	14,926.04
	11	Honolulu	5,268.30	11	Honolulu	10,643.23
	12	Amsterdam	5,114.66	12	London	10,217.65
	13	Kuala Lumpur	4,647.18	13	Madrid	10,032.38
	14	Rome	4,103.64	14	Manila	9,541.74
	15	Copenhagen	3,996.75	15	Sydney	6,452.67
	16	Seattle	3,713.33	16	Bangkok	6,284.12
	17	Karachi	2,239.82	17	Amsterdam	5,302.40
	18	Vancouver	2,234.37	18	Rome	5.163.77
	19	Delhi	2,191.31	19	Guam Islands	4,791.04
	20	Auckland	2,120.80	20	Seattle	4,744.67
	21	Shanghai	1,691.10	21	Beijing	4,971.64
	22	Hamburg	983.82	22	Kuala Lumpur	3,083.49
	23	Jakarta	942.19	23	Copenhagen	2,911.73
	24	Dallas	812.28	24	Anchorage	2,880.37
	25	Madrid	701.46	25	Vancouver	2,676.46
	26	Guam Islands	587.77	26	Bombay	2,243.00
	27	Bombay	537.55	27	Hamburg	1,995.20
	28	Pusan	458.63	28	Shanghai	1,765.43
	29	Rio de Janeiro	391.62	29	Rio de Janeiro	1,737.56
	30	Dusseldorf	260.30	30	Zurich	1,696.40
	31	Cairo	231.97	31	Karachi	1,506.02
	32	Perth	215.63	32	Dallas	1,442.80
	33	Athens	145.27	33	Dusseldorf	1,283.89
	34	Brisbane	90.66	34	Auckland	1,072.72
	35	Saipan	54.63	35	Delhi	1,058.00
	36	Cairins	34.15	36	Pusan	827.65
	37	Nandi	29.46	37	Cairo	424.93

City Origin	Rank	Freight Inbound	Tonnes	Rank	Freight Outbound	Tonnes
Tokyo (Cont.)	38	Dubai	26.62	38	Colombo	403.00
	39	Moscow	18.51	39	Saipan	322.11
	40	Zurich	--	40	Moscow	284.96
				41	Dubai	207.75
				42	Athens	129.78
				43	Nandi	129.30
				44	Brisbane	87.37
				45	Perth	41.12
				46	Cairins	0.76
Hong Kong	1	Tokyo	31,702.57	1	Tokyo	60,419.34
	2	Bangkok	21,581.23	2	Frankfurt	30,301.82
	3	Frankfurt	15,031.03	3	Singapore	15,540.99
	4	Taipei	12,993.71	4	Bangkok	14,732.83
	5	Seoul	9,166.70	5	Seoul	14,335.35
	6	Singapore	7,987.41	6	Paris	10,164.63
	7	Sydney	6,877.80	7	Osaka	9,301.58
	8	Melbourne	6,174.03	8	Manila	9,184.87
	9	Osaka	5,769.30	9	Taipei	9,061.02
	10	Manila	3,476.55	10	Los Angeles	7,800.27
	11	Kuala Lumpur	3,198.74	11	San Francisco	4,587.41
	12	San Francisco	2,706.05	12	Sydney	4,373.98
	13	Paris	2,571.32	13	Melbourne	3,327.25
	14	Bombay	1,723.65	14	Kuala Lumpur	3,237.44
	15	Rome	1,420.39	15	Jakarta	2,627.64
	16	Perth	1,327.67	16	Dubai	2,262.81
	17	Fukuoka	1,043.78	17	Vancouver	2,241.81
	18	Penang	1,015.77	18	Bombay	1,843.72
	19	Delhi	851.88	19	Kaohsiung	1,187.53
	20	Jakarta	822.80	20	Rome	1,791.08
	21	Brisbane	676.10	21	Anchorage	1,660.28
	22	Dubai	378.90	22	Delhi	1,168.41
	23	Johannesburg	301.39	23	Johannesburg	943.59
	24	Los Angeles	195.32	24	Kota Kinabalu	822.97
	25	Anchorage	113.37	25	Fukuoka	604.86
	27	Kaohsiung	64.13	27	Colombo	549.40
	28	Honolulu	62.21	28	Perth	447.19
	29	Nagoya	44.80	29	Abu Dhabi	444.03
	30	Munich	26.80	30	Honolulu	390.63
	31	Denpasar	1.31	31	Nagoya	195.02
				32	Brisbane	150.61
				33	Munich	133.03
				34	Denpasar	3.70

City Origin	Rank	Freight Inbound	Tonnes	Rank	Freight Outbound	Tonnes
Sydney	1	Auckland	12,705.71	1	Auckland	13,952.43
	2	Los Angeles	7,776.14	2	Singapore	7,605.62
	3	Tokyo	6,611.95	3	Hong Kong	7,321.07
	4	London	6,244.67	4	Tokyo	6,269.97
	5	Singapore	6,111.24	5	Los Angeles	3,410.00
	6	Hong Kong	4,331.24	6	San Francisco	2,533.24
	7	Frankfurt	2,247.30	7	Kuala Lumpur	2,217.49
	8	Manila	2,236.45	8	Wellington	2,167.55
	9	San Francisco	2,231.13	9	Christchurch	2,016.79
	10	Wellington	2,068.51	10	Port Moresby	1,824.61
	11	Bangkok	1,966.59	11	London	1,566.15
	12	Honolulu	1,571.52	12	Honolulu	1,472.06
	13	Rome	1,240.65	13	Bangkok	1,373.01
	14	Kuala Lumpur	977.90	14	Nandi	1,269.69
	15	Port Moresby	877.29	15	Manila	1,261.45
	16	Denpasar	829.45	16	Noumea	1,143.46
	17	Vancouver	700.98	17	Jakarta	1,009.16
	18	Bombay	580.93	18	Dubai	920.41
	19	Amsterdam	579.92	19	Vancouver	860.83
	20	Athens	436.69	20	Papeete, Tahiti	749.91
	21	Noumea	427.60	21	Rome	616.73
	22	Nandi	375.40	22	Bahrain Island	418.56
	23	Papeete, Tahiti	212.99	23	Bombay	225.83
	24	Bahrain Island	17.73	24	Amsterdam	120.09
	25	Dubai	14.91	25	Athens	85.83
				26	Denpasar	81.53
				27	Belgrade	74.54
Singapore	1	Tokyo	20,819.99	1	Tokyo	13,486.44
	2	Bangkok	15,601.30	2	Sydney	10,043.41
	3	Hong Kong	14,473.51	3	Jakarta	9,853.10
	4	Taipei	11,090.63	4	Hong Kong	9,110.68
	5	Perth	9,692.61	5	London	8,246.55
	6	Jakarta	8,068.46	6	Kuala Lumpur	7,060.61
	7	Sydney	7,001.99	7	Amsterdam	6,964.67
	8	Amsterdam	6,858.30	8	Seoul	6,013.62
	9	Melbourne	6,334.45	9	Bangkok	5,813.42
	10	Kuala Lumpur	6,082.22	10	Los Angeles	4,460.95
	11	Seoul	4,903.19	11	Melbourne	4,317.45
	12	Frankfurt	4,103.96	12	San Francisco	3,857.36
	13	Osaka	3,977.22	13	Zurich	3,811.54
	14	London	3,924.79	14	Frankfurt	3,731.34
	15	Auckland	3,737.78	15	Penang	3,564.38
	16	Manila	3,556.78	16	Auckland	3,166.26
	17	Medan	3,420.81	17	Paris	2,922.45
	18	San Francisco	3,310.50	18	Taipei	2,950.78
	19	Los Angeles	3,150.88	19	Manila	2,730.16
	20	Copenhagen	3,064.05	20	Perth	2,262.06

City Origin	Rank	Freight Inbound	Tonnes	Rank	Freight Outbound	Tonnes
Singapore (Cont.)	21	Zurich	3,002.80	21	Bombay	2,169.11
	22	Penang	2,985.18	22	Colombo	2,118.54
	23	Brisbane	2,467.59	23	Osaka	1,985.04
	24	Paris	2,263.58	24	Brussels	1,850.81
	25	Colombo	2,059.15	25	Copenhagen	1,797.95
	26	Adelaide	1,993.44	26	Rome	1,270.89
	27	Madras	1,928.85	27	Dubai	1,219.13
	28	Bombay	1,766.87	28	Brisbane	1,213.18
	29	Rome	1,517.80	29	Madras	1,205.01
	30	Brussels	1,403.66	30	Athens	1,082.51
	31	Delhi	785.92	31	Manchester	986.52
	32	Karachi	734.46	32	Karachi	982.17
	33	Manchester	458.23	33	Adelaide	813.09
	34	Mauritius	199.98	34	Delhi	569.13
	35	Athens	140.77	35	Bahrain Island	521.95
	36	Bahrain Island	86.36	36	Mauritius	368.51
	37	Abu Dhabi	62.99	37	Medan	336.39
	38	Dubai	49.37	38	Abu Dhabi	264.09
	39	Muscat	38.00	39	Muscat	126.11
	40	Kuantan	0.89	40	Kuantan	22.87

Source: ICAO, *On-Flight Origin and Destination*, year ending June 30, 1986.

Appendix 3.16

Air Passenger Traffic by Origin - Destination Routes
1986

City Origin	Rank	City Destination	Passengers
Vancouver	1	Los Angeles	183,261
	2	San Francisco	146,893
	3	Tokyo	103,088
	4	Honolulu	74,309
	5	Chicago	72,080
	6	London	63,010
	7	Hong Kong	58,791
	8	Amsterdam	50,709
	9	Frankfurt	26,530
	10	Sydney	13,768
	11	New York	9,825
	12	Auckland	8,112
	13	Nandi	6,835
Toronto	1	New York	466,630
	2	Chicago	382,198
	3	London	167,428
	4	Miami	129,459
	5	Amsterdam	112,009
	6	Los Angeles	106,777
	7	Dallas	98,489
	8	Tampa, Fl.	81,392
	9	Frankfurt	77,289
	10	San Francisco	58,591
	11	Rome	48,445
	12	Montego Bay	45,652
	13	Paris	43,955
	14	Zurich	27,389
	15	Milan	16,567
	16	Honolulu	16,312
	17	Dusseldorf	13,067
	18	Geneva	3,678
	19	Brussels	(data N/A)
Montreal	1	New York	237,096
	2	Chicago	111,351
	3	Miami	103,685
	4	Paris	96,656
	5	London	65,727
	6	Detroit	55,232
	7	Amsterdam	53,926
	8	Tampa, Fl.	37,064
	9	Los Angeles	27,523
	10	Zurich	21,425

City Origin	Rank	City Destination	Passengers
Montreal (Cont'd)	11	Rome	20,657
	12	Brussels	17,325
	13	San Francisco	13,120
	14	Geneva	6,351
	15	Milan	5,637
	16	Rio de Janeiro	5,247
San Francisco	1	Tokyo	212,930
	2	Vancouver	147,991
	3	London	132,190
	4	Hong Kong	128,010
	5	Manila	67,162
	6	Frankfurt	65,863
	7	Guadalajara	61,454
	8	Toronto	57,614
	9	Sydney	37,591
	10	Calgary	31,135
	11	Singapore	24,187
	12	Edmonton	14,332
	13	Montreal	12,584
	14	San Jose Cabo	10,480
	15	Melbourne	10,312
	16	Nandi	4,786
	17	Paris	3,347
Dallas	1	Mexico City	120,310
	2	London	99,585
	3	Toronto	92,856
	4	Acapulco	76,692
	5	Cancun	73,810
	6	Frankfurt	64,705
	7	Puerto Vallarta	38,629
	8	Guadalajara	24,975
	9	Montreal	13,341
	10	Monterrey	11,808
	11	Tokyo	11,463
Los Angeles	1	Tokyo	389,920
	2	London	258,297
	3	Vancouver	196,153
	4	Mexico City	195,688

City Origin	Rank	City Destination	Passengers
Los Angeles (Cont.)	5	Guadalajara	171,482
	6	Seoul	161,637
	7	Toronto	109,977
	8	Auckland	91,473
	9	Frankfurt	90,178
	10	Paris	78,395
	11	Papeete, Tahiti	77,299
	12	Amsterdam	71,093
	13	Sydney	71,051
	14	Puerto Vallarta	70,783
	15	Calgary	68,109
	16	San Jose Cabo	59,630
	17	Mazatlan	49,822
	18	Acapulco	49,240
	19	Rio de Janeiro	36,432
	20	San Salvador	36,378
	21	Taipei	33,715
	22	Manila	33,498
	23	Singapore	32,193
	24	Guatemala City	29,327
	25	Montreal	28,650
	26	Edmonton	27,417
	27	Hong Kong	27,056
	28	Melbourne	26,842
	29	Nandi	23,596
	30	Rome	15,289
	31	Zihuatanejo	15,058
	32	Buenos Aires	14,645
	33	San Jose	13,983
	34	Lima	11,079
	35	Bogota	10,660
	36	Milan	10,387
	37	Panama/Balboa	3,181
	38	Santiago	2,910
	39	Sao Paulo	792
Miami	1	Nassau	336,188
	2	London	195,322
	3	Montego Bay	177,228
	4	Kingston	145,932
	5	Toronto	133,063
	6	Rio de Janiero	130,578
	7	Mexico City	130,410
	8	Panama/Balboa	128,991
	9	Caracas	126,574
	10	Freeport	121,085
	11	Santo Domingo	116,706
	12	Montreal	108,805
	13	Bogota	100,089
	14	San Jose	99,061
	15	Guatemala City	72,886

City Origin	Rank	City Destination	Passengers
Miami (Cont.)	16	Buenos Aires	69,516
	17	Port Au Prince	69,384
	18	Santiago	44,846
	19	Madrid	39,722
	20	Frankfurt	38,355
	21	Quito	35,971
	22	Quayaquil	33,103
	23	Barranquilla	28,001
	24	Cali	27,736
	25	Belize	18,108
	26	San Paulo	17,526
	27	Maracaibo	14,803
	28	La Paz, Bolivia	14,317
	29	Paris	13,973
	30	Port de France	10,737
	31	Lima	8,483
	32	Pointe-a-Pitre	5,434
	33	Manaus	4,969
New York	1	London	886,354
	2	Toronto	465,779
	3	Paris	387,821
	4	Frankfurt	318,675
	5	Santo Domingo	269,920
	6	Rome	261,411
	7	Montreal	233,429
	8	Amsterdam	222,845
	9	Tokyo	215,328
	10	Brussels	193,819
	11	Madrid	162,697
	12	Milan	157,320
	13	Zurich	157,007
	14	Nassau	140,498
	15	Montego Bay	108,608
	16	Copenhagen	107,323
	17	Rio de Janeiro	105,991
	18	Shannon	102,780
	19	Kingston	96,445
	20	Mexico City	92,152
	21	Athens	86,527
	22	Seoul	86,132
	23	Munich	84,298
	24	Geneva	69,625
	25	Bombay	65,317
	26	Puerto Plata	64,739
	27	Stockholm	57,937
	28	Caracas	50,989
	29	Cancun	40,307
	30	Oslo	38,823
	31	Buenos Aires	36,315
	32	Hamburg	34,259

City Origin	Rank	City Destination	Passengers
New York (Cont.)	33	Delhi	30,055
	34	Cairo	29,406
	35	Guayaquil	28,655
	36	Acapulco	26,630
	37	Belgrade	25,816
	38	Bogata	23,615
	39	Kuwait	23,249
	40	Sao Paulo	21,715
	41	Barcelona	20,790
	42	Warsaw	17,577
	43	Freeport	17,360
	44	Vienna	16,443
	45	Panáma/Balboa	14,772
	46	Stuttgart	14,714
	47	Karachi	13,920
	48	Santiago	13,309
	49	Zagreb	13,188
	50	Vancouver	11,833
	51	Istanbul	11,728
	52	Quito	11,563
	53	Ottawa	7,807
	54	Dakar	6,462
	55	Dharan	6,229
	56	Cali	4,925
	57	Nuremberg	3,447
	58	Montevideo	3,058
	59	Dubrovnik	2,243
	60	Dubai	1,236
Chicago	1	Toronto	393,310
	2	London	
	3	Tokyo	111,242
	4	Montreal	106,019
	5	Frankfurt	101,957
	6	Mexico City	78,822
	7	Amsterdam	75,717
	8	Vancouver	72,269
	9	Cancun	61,912
	10	Acapulco	37,126
	11	Paris	32,837
	12	Manila	25,637
	13	Guadalajara	24,677
	14	Calgary	24,507
	15	Winnipeg	23,697
	16	Brussels	18,953
	17	Puerto Vallarta	18,369
	18	Rome	13,938
	19	Munich	9,413
	20	Milan	7,883
	21	Edmonton	5,832

City Origin	Rank	City Destination	Passengers
Tokyo	1	Hong Kong	599,177
	2	Seoul	490,565
	3	Honolulu	485,826
	4	Los Angeles	395,534
	5	Taipei	395,202
	6	Guam Islands	188,878
	7	Singapore	181,158
	8	Seattle	137,001
	9	London	134,683
	10	Chicago	128,022
	11	Vancouver	100,471
	12	Sydney	93,160
	13	Saipan	80,469
	14	Frankfurt	60,701
	15	Kuala Lumpur	53,575
	16	Amsterdam	52,886
	17	Shanghai	47,430
	18	Copenhagen	42,510
	19	Pusan	38,693
	20	Auckland	32,163
	21	Rome	32,127
	22	Rio de Janeiro	30,153
	23	Jakarta	21,860
	24	Delhi	19,141
	25	Athens	17,199
	26	Zurich	16,674
	27	Dusseldorf	14,115
	28	Cairo	12,926
	29	Hamburg	12,777
	30	Dallas	11,985
	31	Nandi	11,475
	32	Colombo	11,010
	33	Karachi	10,187
	34	Brisbane	10,635
	35	Moscow	8,964
	36	Madrid	8,793
	37	Anchorage	7,686
	38	Bombay	4,554
	39	Perth	2,306
	40	Cairns	2,102
	41	Dubai	921
Hong Kong	1	Tokyo	614,576
	2	Bangkok	457,074
	3	Taipei	430,674
	4	Singapore	374,730
	5	Manila	310,007
	6	Osaka	220,747
	7	Seoul	169,798
	8	Sydney	123,072

City Origin	Rank	City Destination	Passengers
Hong Kong (Cont.)	9	San Francisco	122,222
	10	Frankfurt	83,396
	11	Kuala Lumpur	75,404
	12	Melbourne	73,634
	13	Jakarta	66,101
	14	Honolulu	55,171
	15	Fukuoka	41,374
	16	Bombay	34,922
	17	Denpasar	30,085
	18	Los Angeles	29,890
	19	Perth	28,383
	20	Nagoya	27,187
	21	Kota Kinbalu	26,903
	22	Rome	25,300
	23	Paris	24,319
	24	Penang	21,782
	25	Delhi	20,852
	26	Brisbane	20,414
	27	Johannesburg	11,071
	28	Dubai	10,928
	29	Colombo	9,374
	30	Kaohsiung	6,540
	31	Munich	1,884
	32	Anchorage	191
	33	Abu Dhabi	23
Singapore	1	Kuala Lumpur	626,276
	2	Jakarta	427,046
	3	Bangkok	381,272
	4	Hong Hong	352,463
	5	Tokyo	189,537
	6	Sydney	150,568
	7	London	150,461
	8	Penang	141,185
	9	Manila	103,135
	10	Perth	92,564
	11	Osaka	87,289
	12	Melbourne	87,231
	13	Bombay	77,902
	14	Madras	77,285
	15	Auckland	59,743
	16	Colombo	59,451
	17	Medan	53,117
	18	Amsterdam	52,254
	19	Taipei	51,222
	20	Frankfurt	48,258
	21	Los Angeles	37,199
	22	Zurich	36,810
	23	Brisbane	34,176
	24	Seoul	33,653

City Origin	Rank	City Destination	Passengers
Singapore (Cont.)	25	Paris	32,430
	26	Adelaide	32,153
	27	Delhi	29,822
	28	Copenhagen	25,698
	29	Rome	25,465
	30	Athens	21,547
	31	Karachi	21,346
	32	San Francisco	18,866
	33	Dubai	15,804
	34	Mauritius	9,916
	35	Brussels	7,902
	36	Bahrain Island	7,661
	37	Kuantan	7,085
	38	Manchester	5,399
	39	Abu Dhabi	3,408
	40	Muscat	2,629
Sydney	1	Auckland	295,780
	2	Singapore	133,051
	3	Hong Kong	110,618
	4	Tokyo	100,778
	5	Christ Church	86,642
	6	Los Angeles	78,695
	7	Honolulu	68,124
	8	London	66,584
	9	Wellington	54,600
	10	San Francisco	35,570
	11	Bangkok	34,074
	12	Denpasar	33,797
	13	Kuala Lumpur	29,141
	14	Nandi	28,407
	15	Manila	28,359
	16	Port Moresby	22,240
	17	Athens	20,735
	18	Noumea	19,394
	19	Rome	18,150
	20	Frankfurt	17,898
	21	Papeete, Tahiti	17,844
	22	Vancouver	17,739
	23	Bombay	11,959
	24	Amsterdam	7,468
	25	Bahrain Island	1,535
	26	Dubai	1,023
Lima	1	Santiago	23,499
	2	Panama/Balboa	21,764
	3	Buenos Aires	19,906
	4	Bogota	19,542
	5	Mexico City	19,475
	6	Caracus	18,504

City Origin	Rank	City Destination	Passengers
Lima (Cont.)	7	Rio de Janeiro	18,017
	8	Guayaquil	13,736
	9	Quito	12,294
	10	La Paz, Bolivia	12,241
	11	Los Angeles	11,793
	12	Miami	9,170
	13	Havana	6,647
	14	San Paulo	4,817
	15	San Juan,Pr	4,370
	16	San Jose	2,078
Buenos Aires	1	Rio de Janeiro	167,527
	2	Montevideo	163,220
	3	Madrid	80,091
	4	Miami	70,456
	5	Santiago	70,212
	6	San Paulo	64,719
	7	Punta del Este	62,652
	8	New York	43,655
	9	Rome	29,719
	10	Porto Alegre	23,620
	11	Colonia, Uruquay	20,650
	12	Lima	20,346
	13	Paris	17,717
	14	Caracus	14,681
	15	Frankfurt	14,304
	16	Los Angeles	13,605
	17	Mexico City	12,606
	18	Zurich	10,210
	19	Bogota	9,855
	20	Santa Cruz, Bol	7,361
	21	Asuncion	7,222
	22	Amsterdam	6,951
	23	La Paz, Bolivia	6,586
	24	Milan	6,524
	25	Guayaquil	3,473
	26	Panama/Balboa	2,368
	27	Havana	865
	28	Lisbon	690

Source: ICAO, On-Flight Origin and Destination, year ending September 30, 1986.

Appendix 3.17

International Passengers Embarked and Disembarked At Vancouver and U.S. Airports

1986

Rank	Airport	International Passengers
1	New York	17,713,000
2	Miami	6,958,000
3	Los Angeles	5,935,000*
4	Chicago	3,244,000
5	San Francisco	2,585,000
6	Vancouver	2,148,000*
7	Seattle	884,000+
8	Dallas/Ft. Worth	492,000*

* Indicates estimated data

+ Indicates provisional data

Total Passengers Embarked at Vancouver and U.S. Airports

1986

Rank	Airport	Total Passengers
1	New York	78,064,000
2	Chicago	48,469,000
3	Los Angeles	37,648,000
4	Dallas/Ft. Worth	37,104,000
5	San Francisco	24,931,000
6	Miami	19,849,000
7	Seattle	11,467,000
8	Vancouver	6,761,000*

* indicates estimated data

Additional information in Figures A-5 and A-6

Source: IATA, World Air Transport Statistics 1986, #31, pp. 46.

International Passengers Embarked at Vancouver and Non-North American Airports
1986

Rank Passengers	Airport	International
1	London	41,087,000
2	Paris	20,559,000
3	Frankfurt	14,393,000
4	Amsterdam	11,298,000
5	Hong Kong	9,856,000
6	Tokyo	9,719,000*+
7	Mexico City	2,760,000
8	Vancouver	2,148,000*
9	Lima	852,000*

* indicates estimated data
+ indicates provisional data

Total Passengers Embarked at Vancouver and Non-North American Airports
1986

Rank	Airport	Total Passengers
1	London	47,781,000
2	Tokyo	36,825,000*+
3	Paris	32,342,000
4	Frankfurt	19,540,000
5	Mexico City	12,088,000+
6	Amsterdam	11,385,000
7	Hong Kong	9,586,000
8	Vancouver	6,761,000*
9	Lima	1,979,000*

* indicates estimated data
+ indicates provisional data

Additional information in A-7 and A-8.

Source: IATA, World Air Transport Statistics 1986, #31, pp. 46.

Appendix 3.18

Scheduled Services by Carriers Between Origin-Destination City Pairs
1986

City Origin	City Destination	Carriers offering scheduled services from city of origin[1]
Buenos Aires	Amsterdam	AR, KL
	Asuncion	AR, IB
	Bogota	AR, AU
	Caracus	AR, FT, VA
	Colonia, Uruquay	OL, PM
	Frankfurt	LH, AR
	Guayaquil	AR, EA, EU
	La Paz, Bolivia	AR, LB
	Lima	AR, AJ, PL
	Lisbon	KL, SK
	Los Angeles	AR, AU, EA, PA
	Madrid	AR, IB
	Mexico City	AR, AU, EU
	Miami	EA, AR, FT, PA
	Milan	AR, AZ
	Montevideo	AR, AU, IB, PA, PU, RG, SC
	New York	AR, EA, FT, PA
	Paris	AF, AR
	Porto Allegre	AR, SC
	Punta del Este	AR, PU
	Rio de Janeiro	AF, AR, AZ, FT, IB, KL, LH, PA, RG, SC, SK, SR
	Rome	AR, AZ
	Santa Cruz, Bol	AR, LB
	Santiago	AF, AR, AU, AZ, CP, EA, EU, IB, KL, LA, UD, LH, PA, PL, SR
	Sao Paulo	AR, AZ, FT, LH, RG, SC, SR
	Zurich	AR, SR
Chicago	Acapulco	AA, MX
	Brussels	SN, TW
	Calgary	AC, UA
	Cancun	MX, UA
	Edmonton	AC, NW, WA
	Frankfurt	AA, FT, LH, NW, TW
	Guadalajara	AA, MX
	Mexico City	AA, MX
	London	BA, FT, PA, TW
	Manila	FT, NW, PR
	Milan	AZ, TW

City Origin	City Destination	Carriers offering scheduled services from city of origin
	Montreal	AA, AC
	Munich	AA, LH
	Paris	AA, AF, TW
	Puerto Vallarta	AA, MX
	Rome	AZ, TW
	Tokyo	FT, JL, NW, UA
	Toronto	AA, AL, AC, RP, UA
	Vancouver	AC, UA
	Winnipeg	AC, NW
Dallas	Acapulco	AA, MX
	Cancun	AA, MX
	Frankfurt	AA, LH, DL
	Guadalajara	AA, MX
	London	AA, BR
	Mexico City	AA, LH, MX
	Monterrey	CO, MX
	Montreal	AA, DL, AC, RP
	Puerto Vallarta	AA, MX
	Tokyo	FT, NW, TG
	Toronto	AA, UA, AC, AL
Hong Kong	Abu Dhabi	CX, LH
	Anchorage	BA, FT, UA
	Bangkok	AF, AI, BA, CX, JL, KL, LH, SR, TG, UJ, UA
	Bombay	AF, AI, BA, CX, LH, SR
	Brisbane	CX, GF
	Colombo	BA, UJ
	Delhi	AI, AZ, BA, CX, LH
	Denpasar	CX, GA
	Dubai	BA, BR, CX, KL, LH
	Frankfurt	CX, LH
	Fukuoka	CX, JL
	Honolulu	SQ, UA
	Jakarta	CX, GA
	Johannesburg	BA, SA
	Kaohsiung	CX, EG
	Kota Kinbalu	CX, MH
	Kuala Lumpur	CX, MH
	Los Angeles	FT, JL, NW, PA, UA
	Manila	CX, LH, PR
	Melbourne	CX, QF
	Munich	BA, CX, LH
	Nagoya	CX, JL
	Osaka	AI, CX, EG, JL, TG

City Origin	City Destination	Carriers offering scheduled services from city of origin
	Paris	AF, CX
	Penang	CX, MH
	Perth	CX, QF
	Rome	AZ, BA, CX
	San Francisco	CX, FT, JL, NW, PA, SQ, UA
	Seoul	CX, KE, SR, TG
	Singapore	CX, JL, PA, SQ, UA
	Sydney	CX, LH, QF
	Taipei	CO, CX, EG, KE, MH, SQ, TG
	Tokyo	AI, AZ, BA, CP, CK, EG, JL, NW, MH, PA, SR, TG, UA
Lima	Bogota	AF, AV, CF, IB, LE, LH, PL, TB
	Buenos Aires	AR, AV, PL
	Caracus	KL, PL, VA
	Guayaquil	OP, PL, EU, IB, KL
	Havana	CU, PL
	La Paz, Bolivia	LB, LH, PL
	Los Angeles	AR, AU, RG
	Mexico City	AP, AV, PL
	Miami	EU, PL, WP
	Panama/Balboa	AV, CF, OP, PL
	Quito	AF, EU, IB, KL, LH
	Rio de Janeiro	DL, RG
	San Juan,Pr	IB LH
	Sao Paulo	CF, PL, RG, WP
	Santiago	AV, LA, UD, PL
Los Angeles	Acapulco	MX, WA
	Amsterdam	KL, PA
	Auckland	CO, PA, TE, UA
	Bogota	AV, EA
	Buenos Aires	AR, AU, EA, PA
	Calgary	AC, AQ, UA, WA
	Edmonton	AC, AQ, UA, WA
	Frankfurt	AA, LH, NW, PA, WO
	Guadalajara	AM, MX, WA
	Guatemala City	LR, MX, TA
	Hong Kong	JL, NW, PA, UA
	Lima	AR, AU, RG
	London	AA, BA, BR, FT, NW, PA
	Manilla	NW, PR, UA
	Mazatlan	AM, MX, WA
	Melbourne	CO, FT, PA, QF, UA
	Mexico City	AM, CO, LR, MX, WA
	Milan	AZ, TW

City Origin	City Destination	Carriers offering scheduled services from city of origin
	Montreal	AC, EA
	Nandi	CO, PA, QF, TE
	Panama/Balboa	EX, RG
	Papeete, Tahiti	QF, TE, UT
	Paris	AA, AF, TW
	Puerto Vallarta	AM, MX, WA
	Rio de Janeiro	JL, PA, RG
	Rome	AZ, PA, TW
	San Jose	LR, MX
	San Jose Cabo	AM, PS, MX
	Sao Paulo	PA, RG
	San Salvador	LR, TA
	Santiago	AV, EA, PA
	Seoul	FT, KE, NW, UA
	Singapore	FT, NW, PA, SQ, UA
	Sydney	CO, FT, PA, QF, UA
	Taipei	FT, NW, SQ, UA
	Tokyo	FT, JL, KE, NW, MH, PA
	Toronto	AA, AC, RP
	Vancouver	CP, UA, WA
	Zihuatanejo	MX, WA
Miami	Barranquilla	AU, EA, LE, TB
	Belize	TX, TA
	Bogota	AR, AU, AK, EA, LE, TB, UC
	Buenos Aires	AR, EA, FT, PA
	Cali	AU, AK, EA, LE, TB
	Caracas	FT, PA, RG, UA
	Fort de France	AF, EA
	Frankfurt	LH, PA
	Freeport	EA, PA, UP
	Guatemala City	GU, EA, PA
	Guayaquil	AR, EA, EU, UC
	Kingston	EA, JM
	La Paz, Bolivia	EA, LB
	Lima	EU, PL, WP
	London	BA, EA, PA
	Madrid	AM, IB
	Manaus	FT, LB, RG
	Maracaibo	PA, VA
	Mexico City	AM, CO, PA, MX
	Montego Bay	EA, JM
	Montreal	AR, AC, DL, LANassauEA, UP
	Panama/Balboa	EA, EU, LE, LB, OP, PA
	Paris	AM, PA
	Port Au Prince	AF, EA, PA
	Quito	EA, EU

City Origin	City Destination	Carriers offering scheduled services from city of origin
	Rio de Janiero	AR, PA, RG
	Santiago	EA, LA, UC, UD, PA
	Santo Domingo	DO, EA, PA
	San Jose	EA, LR, TA
	Sao Paulo	AR, FT, PA, RG
	Toronto	AC, EA
Montreal	Amsterdam	CP, KL
	Brussels	AC, SN
	Chicago	AA, AC, RP
	Detroit	RP, SN
	Geneva	AC, SR
	London	AC, BA
	Los Angeles	AC, DL
	Miami	LA, AC, AQ, DL, EA, RP
	Milan	CP, AZ
	New York	CP, DL, EA, LA, RP, AZ, CP, AR
	Paris	AF, AC
	Rio de Janeiro	RG, AR
	Rome	AZ, CP
	San Francisco	AA, AC, RP
	Tampa, Fl.	BA
	Zurich	AC, SR
New York	Acapulco	AA, AM, EA
	Amsterdam	KL, PA, RJ, TW
	Athens	DA, TW
	Barcelona	IB, TW
	Belgrade	JU, PA
	Bogata	AU, EA
	Bombay	AI, PA, TW
	Brussels	FD, FF, FT, PA, PE, SN, TW
	Buenos Aires	AR, EA, FT, PA
	Cairo	MS, PK, TW
	Cali	AU, EA
	Cancun	AM, EA, UA
	Caracas	FT, PA, VA
	Copenhagen	NW, SK, TW
	Dakar	PA, PK
	Delhi	AI
	Dharan	PA, SU
	Dubai	AI, FT, PA, PK
	Dubrovnik	JU, PA
	Frankfurt	AI, FT, KU, LH, PA, PK, TW, WO
	Freeport	TW, UP
	Guayaquil	EA, CU
	Geneva	PA, SR, TW

City Origin	City Destination	Carriers offering scheduled services from city of origin
	Hamburg	LH, PA
	Istanbul	PA, PK
	Karachi	PA, PK
	Kingston	AA, JM
	Kuwait	KU, TW
	London	AI, BA, BR, FT, KU, PA, PE, TW, WO
	Madrid	IB, TW
	Mexico City	AM, CO, EA, PA
	Milan	AZ, PA, TW
	Montego Bay	AA, JM
	Montevideo	LA, PA
	Montreal	AR, AT, AC, EA, LA, PI, LO, OK
	Munich	LH, PA, TW
	Nassau	DL, EA, PA, TW, UP
	Nuremberg	LH, PA
	Oslo	NW, SK
	Ottawa	AG, PI
	Panama/Balboa	EA, EU, PA
	Paris	AF, AI, MS, PA, PK, TW
	Puerto Plata	AA, DO
	Quito	EA, EU
	Rio de Janeiro	AR, PA, RG
	Rome	AZ, PA, TW
	Santiago	EA, LA, UD
	Santo Domingo	AA, DO, EA, PA
	Sao Paulo	
	Seoul	KE, NW, PA, UA
	Shannon	AF, EI, FT, NW, PA
	Stockholm	NW, SK
	Stuttgart	LH, PA, TW
	Tokyo	FT, JL, NW, PA, UA
	Toronto	AA, AL, AC
	Vancouver	AC, UA
	Vienna	PA, RJ
	Warsaw	LO, PA
	Zagreb	JU, PA
	Zurich	FT, PA, SR, TW
San Francisco	Calgary	AC, UA
	Edmonton	AC, UA
	Frankfurt	AA, LH, WO, PA, FT
	Guadalajara	WO
	Hong Kong	CX, FT, JL, NW, PA, SQ, UA
	London	BA, FT, PA, TW, WO
	Manila	NW, PA, PR, UA
	Melbourne	CO, PA, QF, UA
	Montreal	AC, RP

City Origin	City Destination	Carriers offering scheduled services from city of origin
	Nandi	CO, QF
	Paris	AA, AF, TW
	San Jose Cabo	PS, MX
	Singapore	NW, UA, SQ, FT
	Sydney	CO, PA, QF, UA
	Tokyo	FT, JL, NW, PA, UA
	Toronto	AA, AC, RP, UA
	Vancouver	CP, UA, CX, WA
Singapore	Abu Dhabi	BA, GA, SN, SQ, SR
	Adelaide	BA, QF, SQ
	Amsterdam	GA, KL,QF, SQ
	Athens	OA, QF, SQ
	Auckland	BA, SQ, TE
	Bahrain Island	QF, SQ, UI
	Bangkok	AZ, CX, JL, QF, SK, SQ, SR, TG
	Bombay	AI, AC, AZ, GA, LH, QF, SQ, SR
	Brisbane	BA, QF, SQ
	Brussels	SN, SQ
	Colombo	KL, PK, SQ, SR, UJ, UT
	Copenhagen	SK, SQ
	Delhi	KL, SQ
	Dubai	SN, SQ
	Frankfurt	GA, LH, QF, SQ
	Hong Hong	FT, JL, NW, PA, SQ, UA
	Jakarta	CX, GA, KL, SQ, TG, UT
	Karachi	KL, PK, SQ, SR
	Kuala Lumpur	AI, FT, KL, MH, OK, PK, SU, SQ
	Kuantan	MH, SQ
	London	AC, BA, QF, SQ
	Los Angeles	NW, PA, SQ, UA
	Madras	AI, SQ
	Manchester	QF, SQ
	Manila	PR, SQ
	Mauritius	MK, SQ
	Medan	GA, SQ
	Melbourne	AZ, BA, OA, GF, SQ, TG
	Muscat	BA, KL, UT
	Osaka	JL, SQ
	Paris	GA, SQ, UT
	Penang	MH, SQ
	Perth	AI, BA, QF, SQ
	Rome	AZ, GA, QF, SQ
	San Francisco	NW, SQ, UA
	Seoul	KE, SQ
	Sydney	AI, AZ, BA, OA, QF, SQ, TG, UT
	Taipei	FT, NW, SQ

City Origin	City Destination	Carriers offering scheduled services from city of origin
	Tokyo	FT, JL, NW, PA, SQ, UA
	Zurich	GA, SQ, SR
Sydney	Amsterdam	KL, QF
	Athens	OA, QF
	Auckland	BA, CO, PA, QF, TE, UA
	Bahrain Island	QF, UT
	Bangkok	AZ, BA, QF, TG
	Bombay	AI, AZ, BA, QF
	Christ Church	QF, TE
	Denpasar	GA, QF
	Dubai	JU, KL, LH
	Frankfurt	LH, QF
	Hong Kong	CX, QF
	Honolulu	CO, CP, PA, QF, UA
	Kuala Lumpur	LH, MH, QF
	London	BA, QF
	Los Angeles	CO, PA, QF, UA
	Manila	PR, QF
	Nandi	CO, CP, QF
	Noumea	GF, UT
	Papeete, Tahiti	QF, TE, UT
	Port Moresby	PX, QF
	Rome	AZ, QF
	San Francisco	CO, PA, QF, UA
	Singapore	AI, AZ, BA, OA, QF, SQ, TG, UT
	Tokyo	JL, QF
	Vancouver	CP, QF
	Wellington	QF, TE
Tokyo	Amsterdam	JL, KL
	Anchorage	AF, BA, FT, JL, KL, LH, NW, SK, SN
	Athens	JL, KL, SR
	Auckland	JL, TE
	Bombay	AI, IB, SR
	Brisbane	JL, QF
	Cairns	JL, QF
	Cairo	JL, MX
	Chicago	FT, JL, NW, UA
	Colombo	BA, UJ
	Copenhagen	JL, SK
	Dallas	NW, TG
	Delhi	AI, AZ, JL
	Dubai	AF, KL, LH
	Dusseldorf	JL, LH
	Frankfurt	JL, LH
	Guam Islands	CO, JL, NW

City Origin	City Destination	Carriers offering scheduled services from city of origin
	Hamburg	JL, LH
	Hong Kong	AI, AZ, BA, CP, CX, EG, JL, NW, MH, PA, SR, TG, UA
	Honolulu	JL, KE, NW, PA, UA
	Jakarta	GA, JL
	Karachi	JL, LH, PK, SP
	Kuala Lumpur	JL, NW, MH
	London	BA, JL
	Los Angeles	FT, JL, KE, NW, HH, PA, RG, SG, UA
	Madrid	IB, JL
	Moscow	AF, JL, SK
	Nandi	JL, TE
	Perth	JL, QF
	Pusan	JL, KE
	Rio de Janeiro	JL, RG
	Rome	AZ, JL
	Saipan	CO, JL
	Seattle	FT, JL, NW, TG, UA
	Seoul	AF, FT, JL, KE, NW, PA, UA
	Shanghai	JL, NW, PA, UA
	Singapore	FT, JL, NW, PA, SQ, UA
	Sydney	JL, QF
	Taipei	CX, EG, FT, NW, MH, PA, SQ, TG, UA
	Vancouver	CP, JL
	Zurich	JL, SR
Toronto	Amsterdam	CP, KL
	Brussels	AC, SN
	Chicago	AL, RP, AA, AC, UA
	Dallas	AA, AL, AC
	Dusseldorf	AC, LH
	Frankfurt	AC, LH
	Geneva	AC, SR
	Honolulu	AA, CP
	London	AC, BA
	Los Angeles	AA, AC, RP, UA
	Miami	AC, EA
	Milan	CP, AZ
	Montego Bay	AC, JM
	New York	AA, AC, AL
	Paris	AF, AC
	Rome	AZ, CP
	San Francisco	AC, AA, RP, UA
	Tampa, Fl.	AC, AL
	Zurich	SR, AC
Vancouver	Amsterdam	KL, CP

City Origin	City Destination	Carriers offering scheduled services from city of origin
	Auckland	CP, TE, CP, QF
	Chicago	UA, AC, WA
	Frankfurt	AC, LH
	Hong Kong	LH, CP, CX
	Honolulu	CP, CO, QF, WA, TE
	London	AC, BA
	Los Angeles	CP, UA, WA
	New York	AC, UA
	San Francisco	KL, UA, WA, CX
	Sydney	CP, QF
	Tokyo	CP, JL

Source: ICAO, On-Flight Origin and Destination, year ending September 30, 1986.

INDEX OF AIR CARRIER CODES

AC	Air Canada
AF	Air France
AI	Air India
AK	Arca
AL	US Air
AM	Aeromexico
AO	Avianco
AR	Aerolineas Argentinas
AT	Royal Air Maroc
AU	Austral
AV	Avianca
AZ	Alitalia
BA	British Airways
BR	British Caledonia
CF	Faucett
CO	Continental
CP	Canadian Pacific (now dba Canadian Airlines Intl.)
CU	Cubana
CX	Cathay Pacific
DA	Dan-Air Services
DL	Delta Airlines
DO	CDA
EA	Eastern
EG	Japan Asia Airways
EI	Aer Lingus Aerlinte
EU	Ecuatoriana
FF	Tower Air
FG	Ariana
FT	Flying Tiger
GA	Garuda
GF	Gulf Air
GU	Aviateca
HH	Somali Airlines
IB	Iberia
JL	Japan Airlines
JM	Air Jamaica
JU	JAT
KE	Korean Air
KL	KLM
KU	Kuwait Airways
LA	Lan Chile
LB	LAB
LE	LAC
LH	Lufthansa
LO	LOT
LR	Lacsa
MH	MAS
MS	Eqyptair
MX	Mexicana
NW	Northwest
OA	Olympic
OC	AirCal
OK	CSA
OL	ARCO
OP	Air Panama
PA	Pan American
PE	People's Express
PI	Piedmont
PK	PIA
PL	Aeroperu
PR	PAL
PX	Air Niugini
QF	Quantas
RG	Varig
RJ	Alia
RP	Republic
SA	SAA
SC	Cruzeiro
SK	SAS
SN	Sabena
SQ	SIA
SR	Swissair
SU	Aeroflot
TA	Taca
TB	Tampa-Colombia
TE	Air New Zealand
TG	Thai International
TW	TWA
TX	TAN

UA	United
UC	Ladeco
UD	Fast Air
UI	Air Rwanda
UJ	Air Lanka
UP	Bahamasair
UT	UTA
VA	Viasa
WA	Western
WO	World Airways
WP	Aeronaves del Peru

Appendix 3.19

International Freight Lifted at Vancouver and Selected Airports, 1985 - 1986
Thousands of Freight Tonnes

Rank	Airport	International Freight
1	Tokyo	770.2
2	London	758.8
3	Frankfurt	731.4
4	Paris	681.9
5	Amsterdam	460.6
6	Hong Kong	432.9
7	Toronto	113.7
8	Mexico City	50.7*
9	Lima	28.0*
10	Vancouver	25.5

* indicates estimated data

IATA, World Air Transport Statistics 1986, #31.

ICAO Digest of Statistics, No. 327, Airport Traffic 1985.

Appendix 3.20

Total Freight at Vancouver and Selected Airports
Thousands of Freight Tonnes
1986

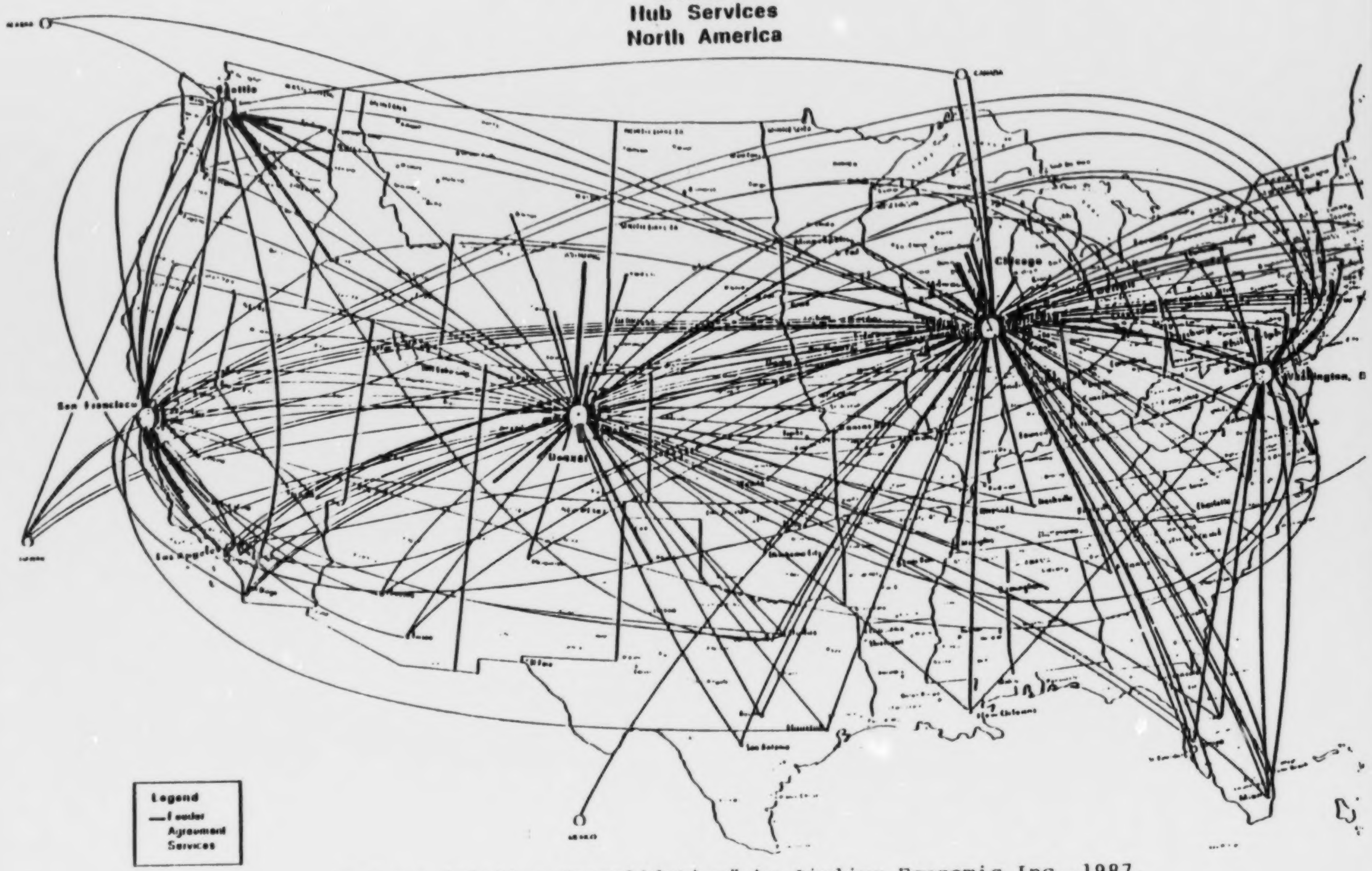
Rank	Airport	Total Freight
1	Tokyo	1124.1
2	Frankfurt	830.0
3	London	785.9
4	Paris	752.2
5	Amsterdam	460.7
6	Hong Kong	432.9
7	Toronto	273.4
8	Vancouver	102.5
9	Mexico City	72.5*
10	Lima	55.6*

* Indicates estimated data

IATA, World Air Transport Statistics 1986, #31.

Appendix 3-21

United
Hub Services
North America


Seattle
San Francisco
Los Angeles
Denver
Chicago
Washington, D
New Orleans
San Antonio
Houston
Legend
Feeder
Agreement
Services

Source: "Airline Consolidation" by Airline Economic Inc.,1987.

Appendix 3.22

Liberal Bilaterals and New Gateways into the United States

Year Bilateral Signed	Country	Number of Gateways
1978	The Netherlands	2
1978	Israel	4
1978	Korea	1
1978	Papua - New Guinea	2
1978	Belgium	2
1978	Germany	6
1979	Fiji	2
1979	Jamaica	10
1979	Singapore	3
1979	Thailand	1
1979	Taiwan	7
1980	Finland	3
1980	Jordan	4
1980	New Zealand	2
1980	Philippines	2

Source: Eva Busza (1987), "The Civil Aviation Cartel: A Study in the Politics of International Collaboration". Draft of Masters Thesis, University of British Columbia, pp. 135 - 139.

Changing North American Traffice Patterns

This section will provide a closer look how traffic patterns have changed at major North American airports since the mid 1970s, resulting in some airports receiving major traffic gains at the expense of other airports. Section A will examine how John F. Kennedy airport has fared under U.S. policies adopted over the last 10 years. Section B will look at international traffic patterns at Dallas-Ft. Worth and Atlanta. Section C will examine Toronto's position.

A. JFK

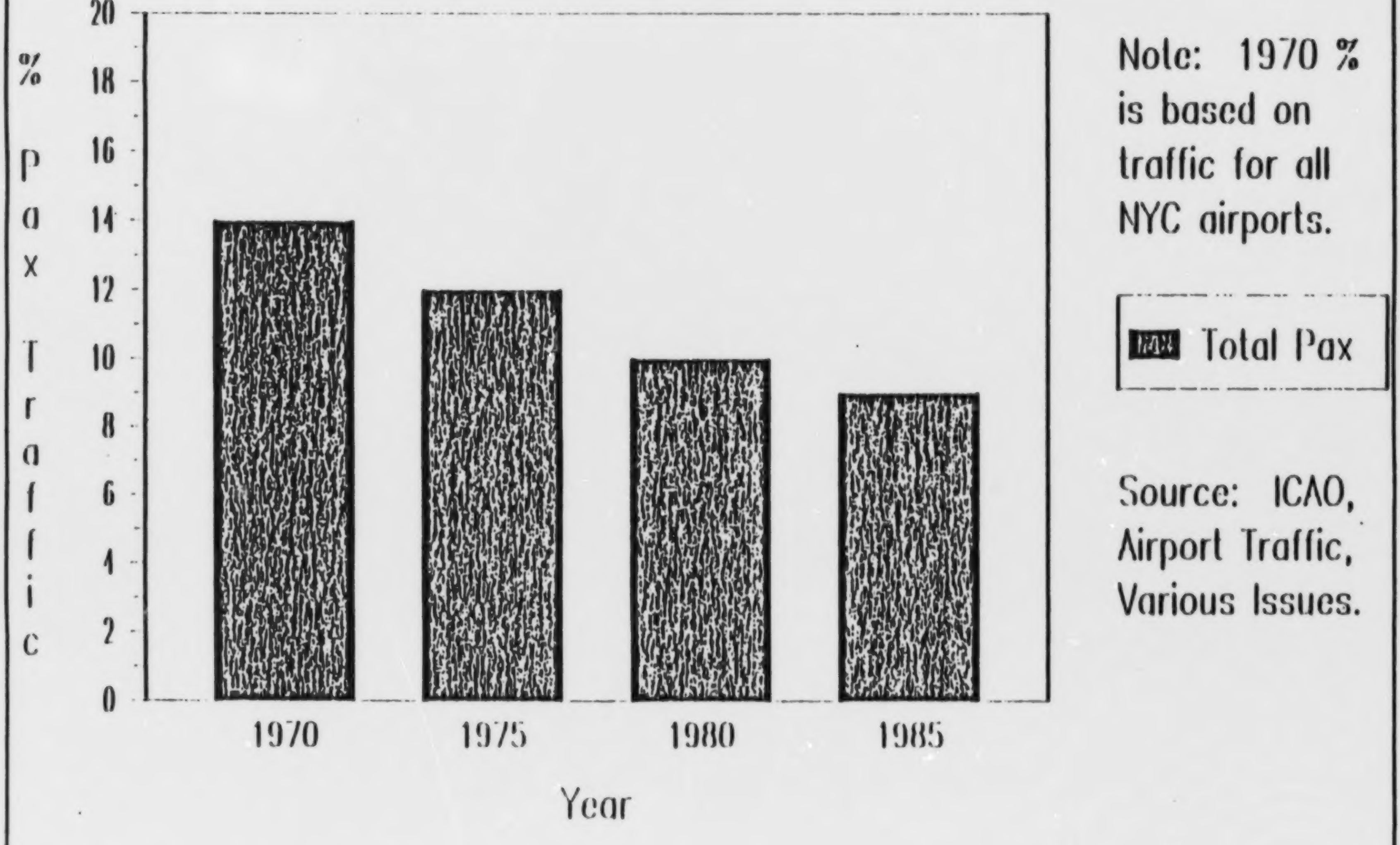
As outlined in the main report, U.S. deregulation, enacted in the late 1970s, fostered the creation of hubs in a number of American cities, while U.S. bilateral policy allowed foreign routes into these hubs. These developments reduced the importance of coastal airports, such as J.F.K. in New York City, as ports of entry into the United States.

Figure V-1 shows how J.F.K.'s share of total U.S. passenger traffic changed between 1970 and 1985. From the figure it can be seen that passenger traffic declined, fairly steadily, from 14 percent of the U.S. market in 1970, to 9 percent of the U.S. market in 1985. Figure V-2 shows that JFK's share of cargo traffic also declined, fairly steadily, from 25 percent of the U.S. market in 1970 to 20 percent in 1985.

Figures V-3 and V-4 show more clearly how J.F.K. fared under the new U.S. international policy. Figure V-3 indicates that J.F.K.'s share of U.S. international passenger traffic declined from 50 percent in 1970 to 43 percent in 1975 and then to 34 percent in 1980 before rising to 38 percent

Figure [illegible]

JFK -- Percent of Total Passenger Traffic
of Major U.S. Airports

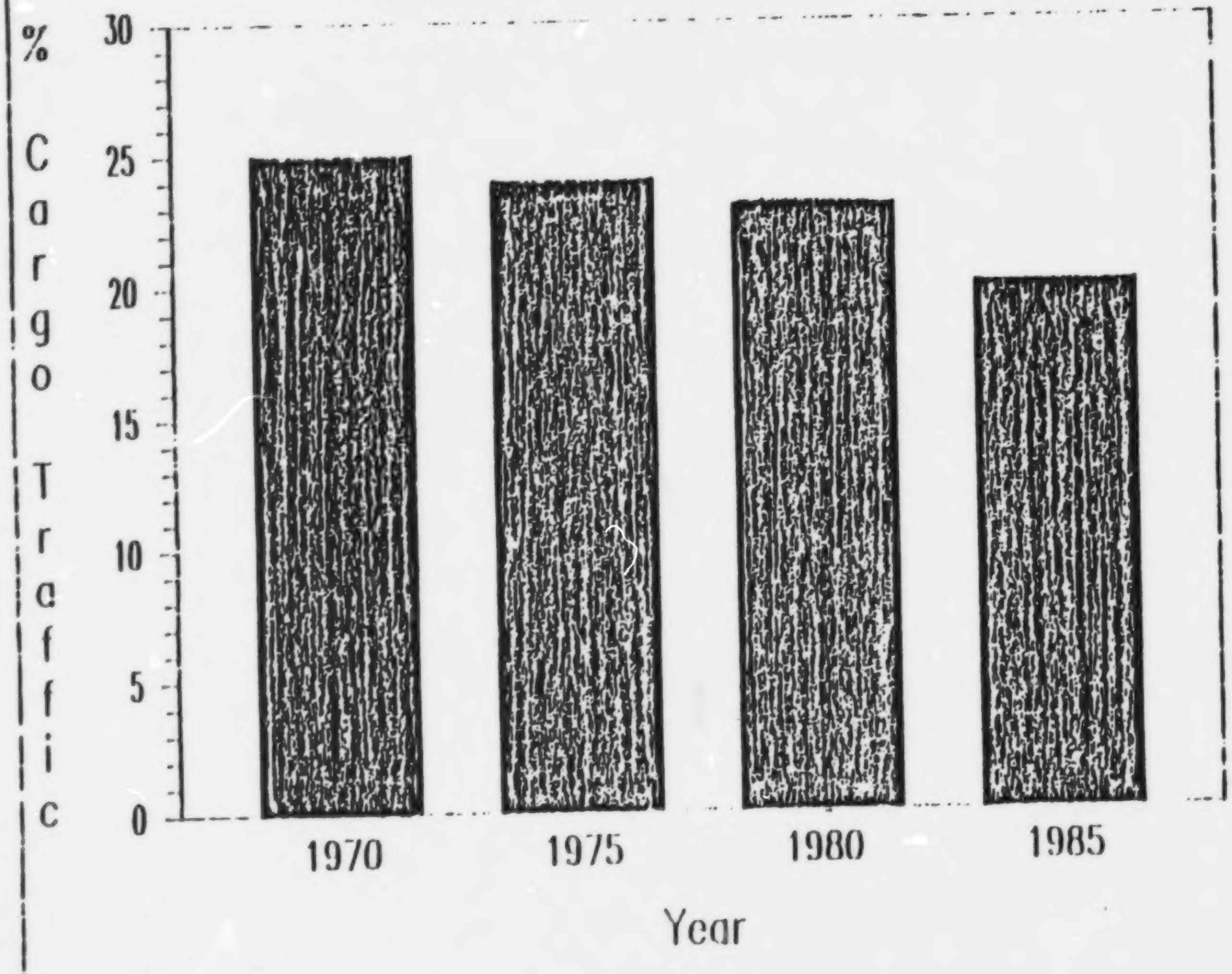


Note: 1970 % is based on traffic for all NYC airports.

Source: ICAO, Airport Traffic, Various Issues.

JFK -- Percent of Total Cargo Traffic

of Major U.S. Airports

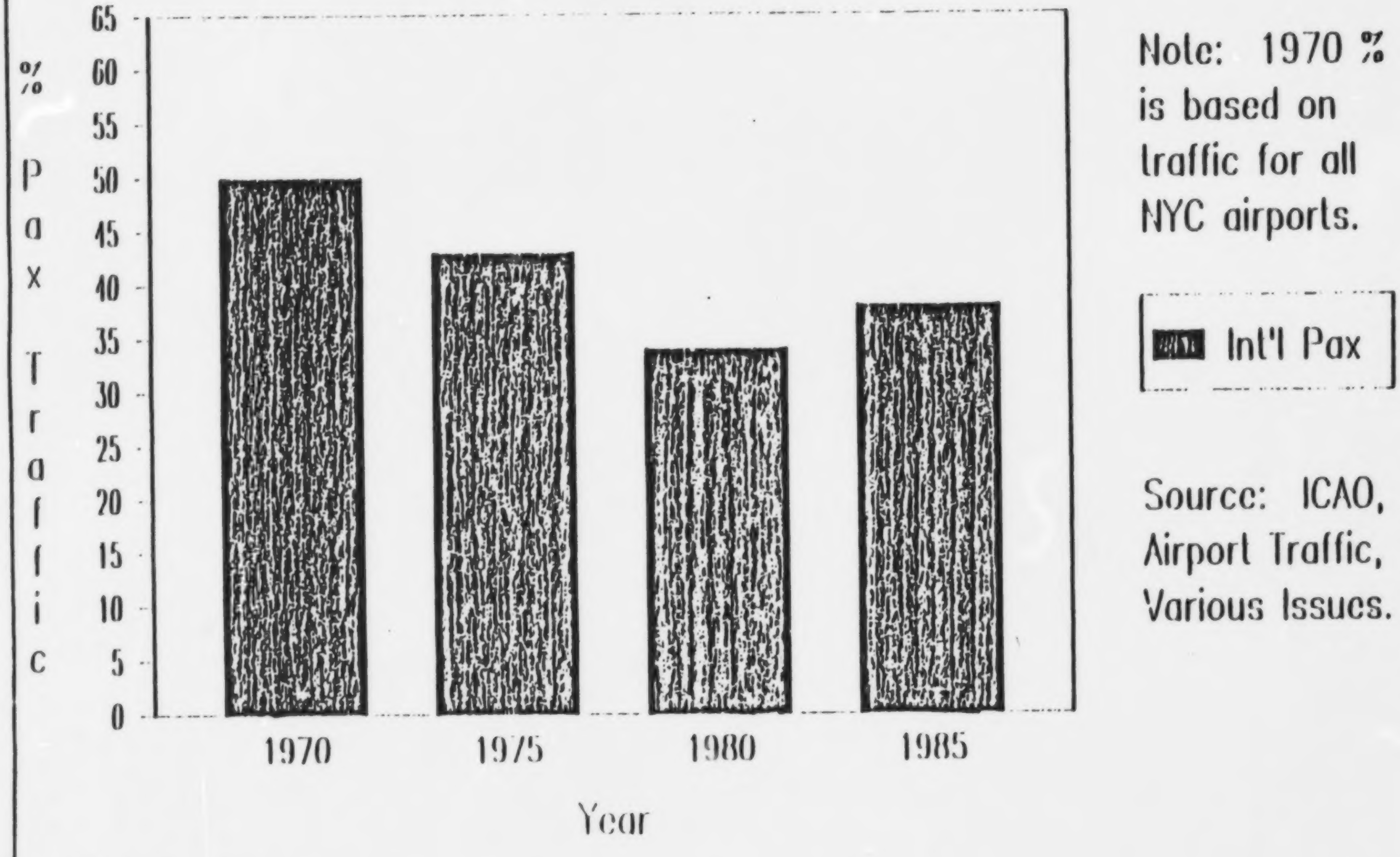


Note: 1970 %
is based on
traffic for all
NYC airports.

Source: ICAO,
Airport Traffic,
Various Issues.

Figure V-[illegible]

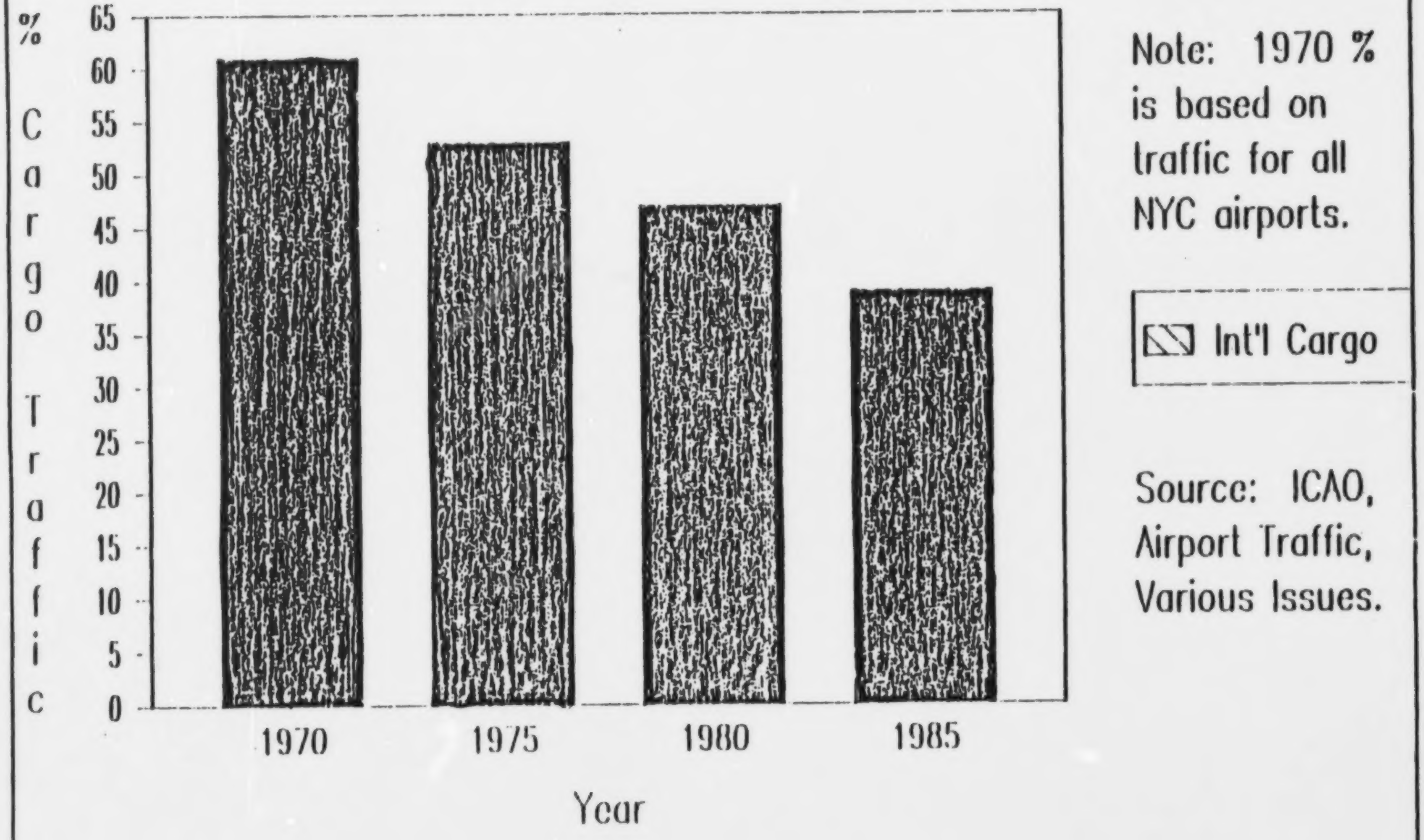
JFK -- Percent of International Passenger Traffic
of Major U.S. Airports



Note: 1970 % is based on traffic for all NYC airports.

Source: ICAO, Airport Traffic, Various Issues.

JFK – Percent of International Cargo Traffic of Major U.S. Airports



Note: 1970 % is based on traffic for all NYC airports.

Source: ICAO, Airport Traffic, Various Issues.

in 1985. Figure V-4 shows that JFK's share of international cargo traffic declined steadily from 61 percent in 1970 to 39 percent in 1985.

Table V-2 compares passenger and cargo growth at J.F.K. to growth at three other major airports - L.A., Chicago, and Dallas-Ft. Worth. Comparisons are provided for two periods, 1975-1985 and 1980-1985. Note that during the 10 year period, J.F.K. outperformed Chicago in passenger and cargo growth, but that Los Angeles topped both J.F.K. and Chicago in passenger and cargo growth rates. (1975 data were not available for Dallas-Ft. Worth.) When just the five-year post-deregulation period -- 1980-1985 -- is considered, J.F.K. had the lowest cargo and passenger growth rates among the airports considered, and Dallas-Ft. Worth the highest. This is an indication of the shifting traffic pattern away from J.F.K. to the inland hub cities, such as Dallas-Ft. Worth.

In summary, between 1970 and 1985, the importance of J.F.K. as a gateway airport has declined. This is most evident when looking at the decrease in the airport's share of international services, and when comparing 1980s growth rates at JFK to those of other major U.S. airports.

B *Dallas-Ft. Worth and Atlanta*

The airports at Dallas-Ft. Worth and Atlanta have been major beneficiaries of the realignment of the United States air transport industry into a hub and spoke system. Both of the airports have been chosen as hubs by major carriers -- Dallas-Ft. Worth by American, and Atlanta by Delta and Eastern. The two airports also benefited from the new U.S. international policy.

Table V-3 compares routes and international passenger totals for Dallas-Ft. Worth for the months of March 1976 and March 1980. The effects of the new bilaterals can be clearly seen. Dallas-Ft. Worth had four international services to Europe in 1980 (Amsterdam, Brussels, Frankfurt,

Table V-2

Passenger and Cargo Growth
JFK vs. Other U.S. Airports

	Airports			
	JFK	LA	CHI	DFW
Total Passenger Growth				
1975-1985	48%	59%	30%	N/A
1980-1985	8%	14%	12%	72%
Total Cargo Growth				
1975-1985	10%	18%	-4%	N/A
1980-1985	-7%	5%	-2%	37%

Source: International Civil Aviation Organization, Airport Traffic, Montreal, various issues

Table V-3

Dallas-Ft. Worth
Originating Passengers on Regular, Non-Stop, International Scheduled Routes

Destination	Number of Passengers March 1976	 March 1980
Acapulco	2,337	7,741
Amsterdam	0	409
Brussels	0	498
Frankfurt	0	1,285
Guadalajara	1,970	2,806
London	0	5,112
Mexico City	5,887	11,793
Puerto Vallarta	0	58
Toronto	3,097	0
San Jose	0	6,591
Total	13,191	36,293
Increase in Passengers March 1976 to March 1980	175%	

Note: Passenger data includes all totals as reported to ICAO by airlines.

Source: ICAO, Traffic By Flight Stage, March 1976 and March 1980.

and London) whereas it had none in 1976. Total passengers carried on international services from Dallas-Ft. Worth also increased substantially, from 13,000 in March 1976 to 36,000 in March 1980.

Atlanta, like Dallas-Ft. Worth, was able to benefit from the new U.S. international policy. Table V-4 shows international routes and passengers carried out of Atlanta for March 1976 and March 1980. Atlanta was able to add two European routes over the five year period -- to Brussels and London -- and to increase its international passengers from 3,800 to 15,700.

In summary, both Atlanta and Dallas-Ft. Worth benefitted from new U.S. policies adopted in the late 1970s. Both cities became major domestic hub cities and were able to add international routes, as well.

C *Toronto*

Toronto is an important competitor to Vancouver for airport business, not only because of its size and importance to the Canadian economy, but also due to its central position in the Canadian hub and spoke system and because of its larger number of international air connections. Figure V-5 compares the number of international air connections at Toronto to the number of international connections available at Vancouver. Note, from the figure, that Toronto has far more connections than Vancouver to Latin America and the Caribbean, to the United States, and to Europe. Vancouver only has more non-stop routes than Toronto to Pacific destinations.

Not only is Toronto well-connected, but it has also been growing in relation to Canada's other major international airports. As is illustrated in Figure V-6, Toronto's share of major Canadian airport passenger traffic increased from 45 percent in 1970 to 53 percent in 1985. During the same time period, as is shown in Figure V-7, Toronto's share of major Canadian *cargo* traffic increased from 39 percent to 54 percent. Figures V-8 and V-9 shows that Toronto was also able to increase

Table V-4

Atlanta
Originating Passengers on Regular, Non-Stop International Scheduled Routes

Destination	Number of Passengers	
	March 1976	March 1980
Acapulco	248	0
Brussels	0	3,556
London	0	5,876
Mexico City	2,024	5,758
Montego Bay	1,609	251
Montreal	0	275
Total	3,881	15,716
Increase in Passengers March 1976 to March 1980	305%	

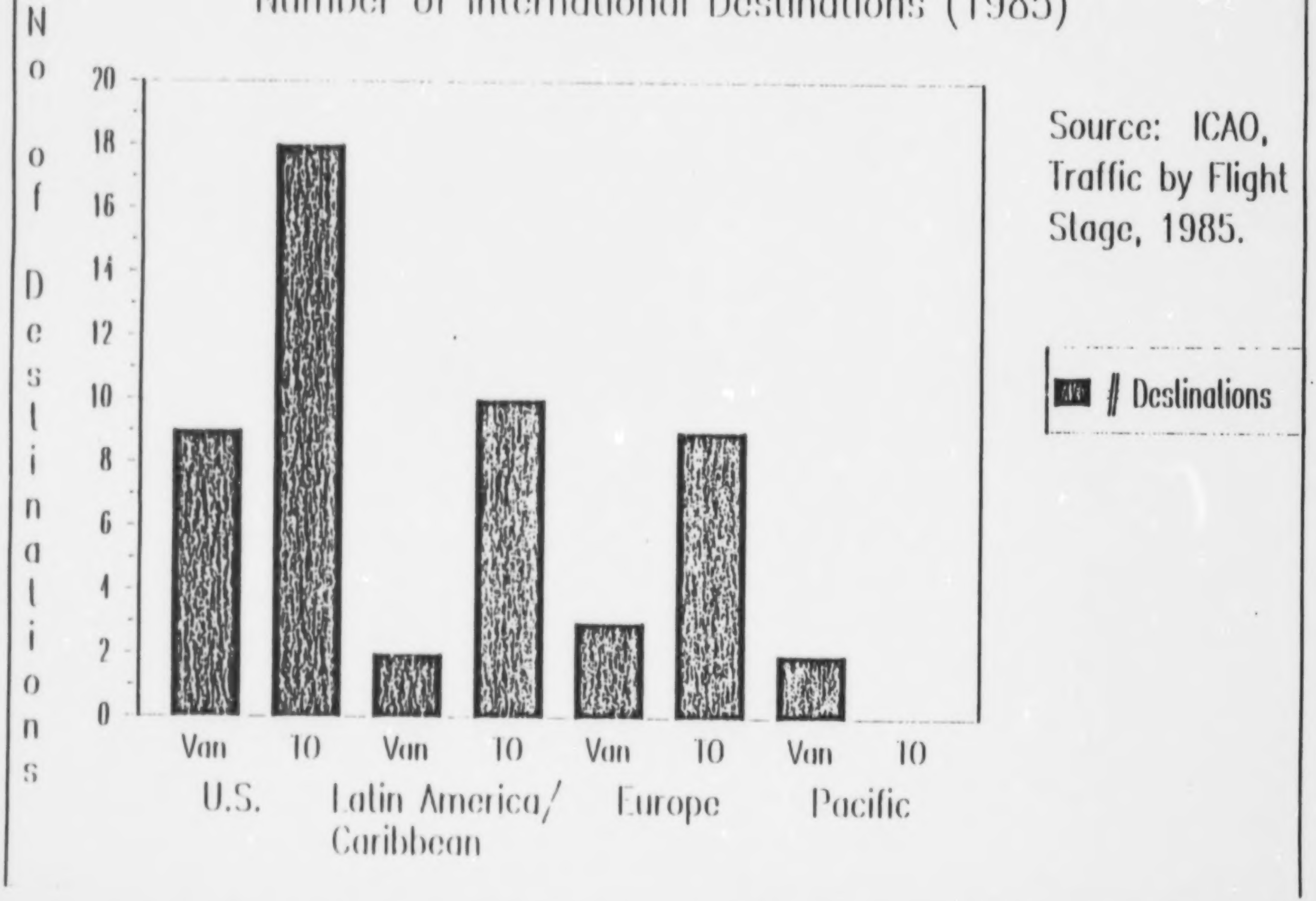
Note: Passenger data includes all totals as reported to ICAO by airlines.

Source: ICAO, Traffic By Flight Stage, March 1976, March 1980.

Figure V-5

VANCOUVER AND TORONTO

Number of International Destinations (1985)

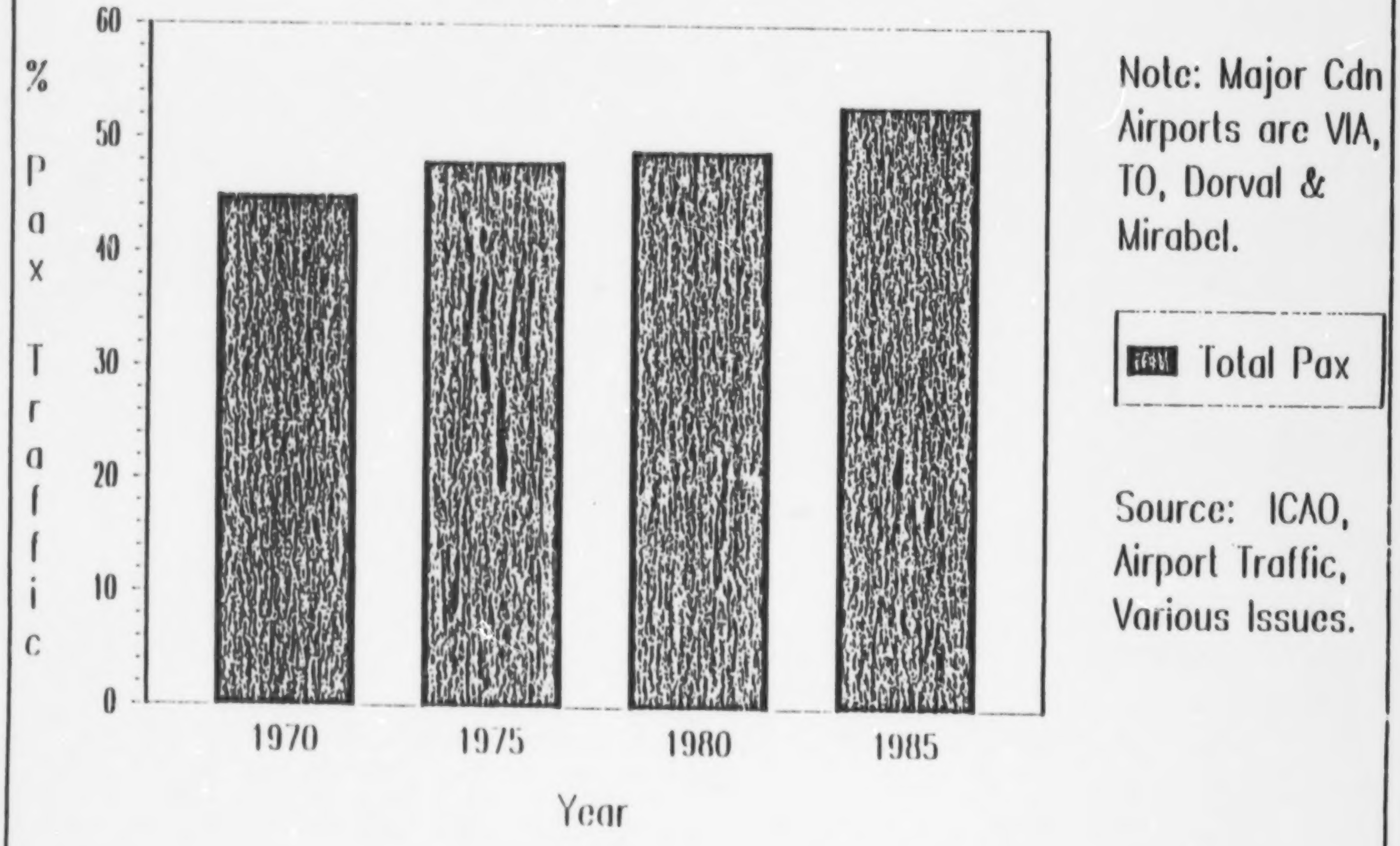


Source: ICAO, Traffic by Flight Stage, 1985.

Fig V-6

Toronto – Percent of Total Passenger Traffic

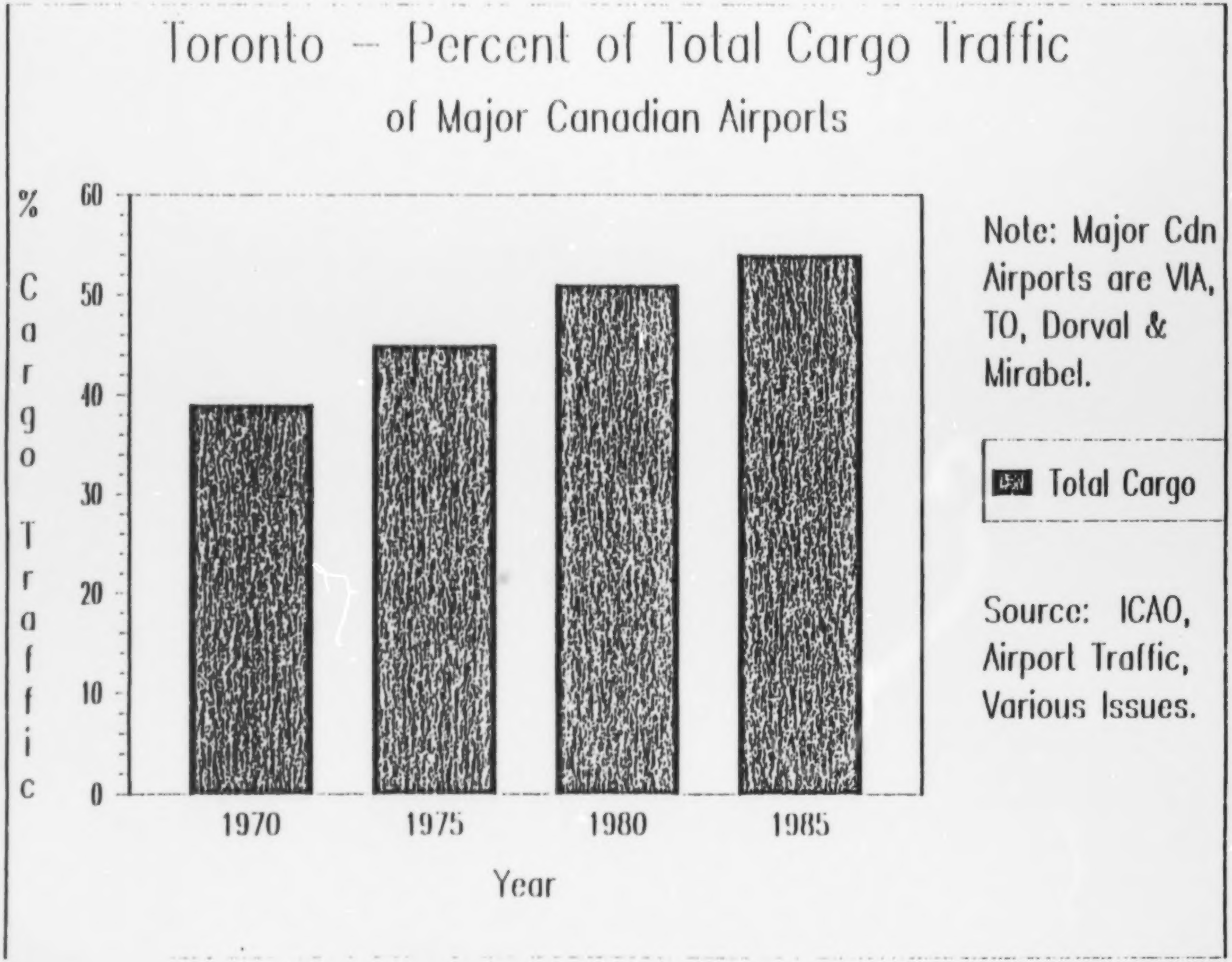
of Major Canadian Airports



Note: Major Cdn Airports are VIA, TO, Dorval & Mirabel.

Source: ICAO, Airport Traffic, Various Issues.

Figure 5-7



Toronto — Percent of Total Cargo Traffic

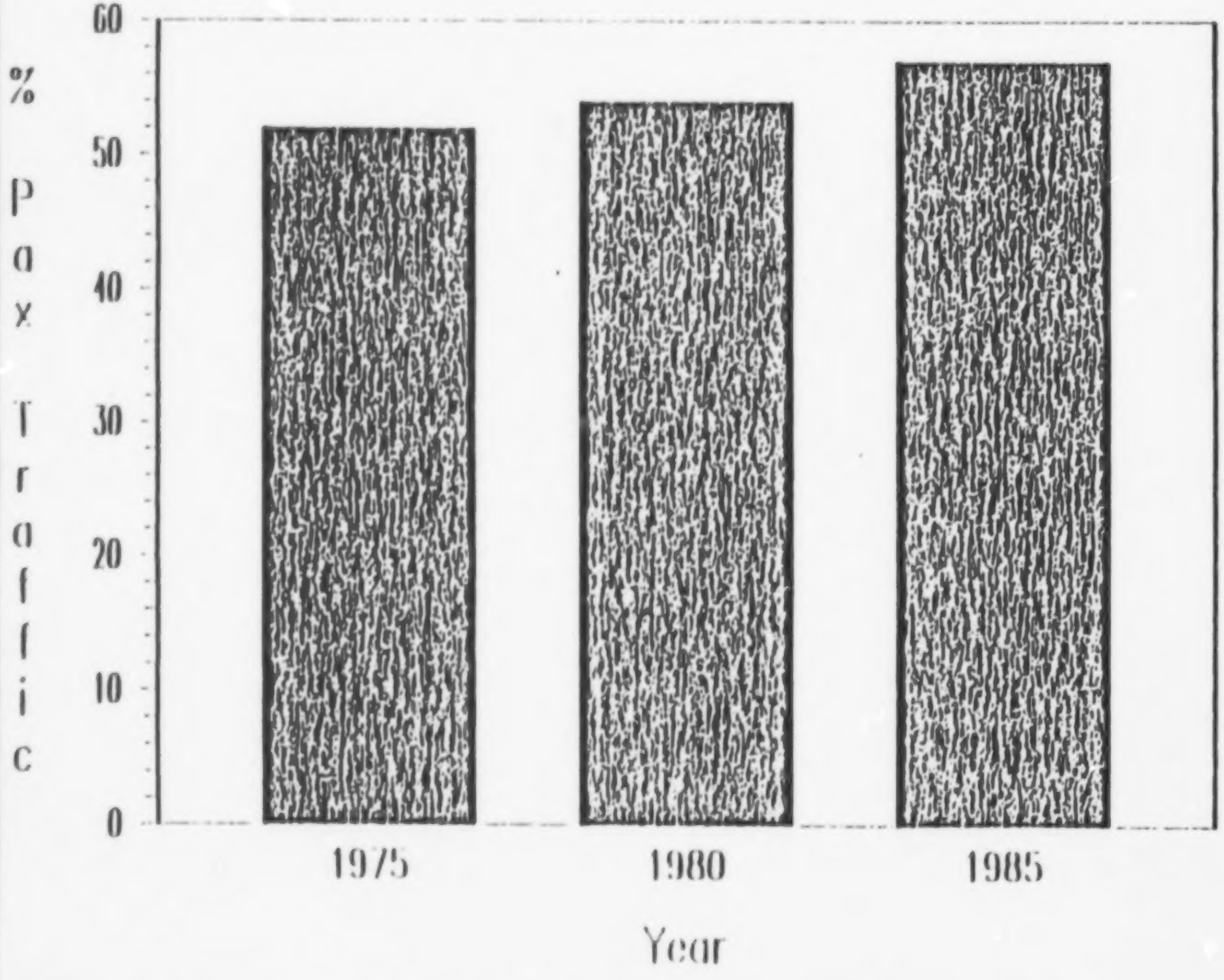
of Major Canadian Airports

Note: Major Cdn Airports are VIA, TO, Dorval & Mirabel.

Source: ICAO, Airport Traffic, Various Issues.

Figure V-8

Toronto -- Percent of International Passenger Traffic of Major Canadian Airports



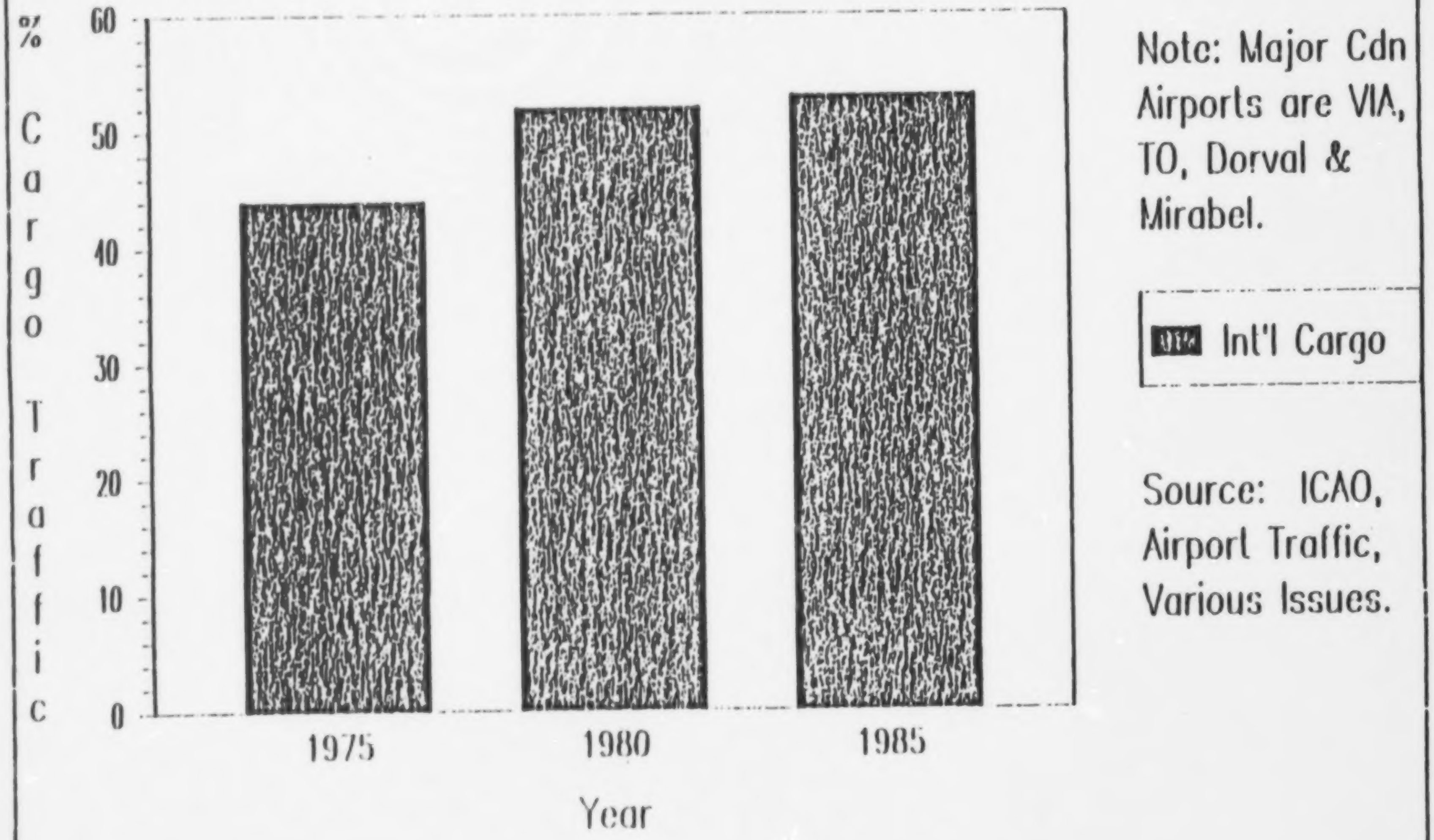
Note: Major Cdn Airports are VIA, TO, Dorval & Mirabel.

Source: ICAO, Airport Traffic, Various Issues.

Fig V-9

Toronto -- Percent of International Cargo Traffic

of Major Canadian Airports



Note: Major Cdn Airports are VIA, TO, Dorval & Mirabel.

Source: ICAO, Airport Traffic, Various Issues.

its share of *international* traffic between 1975 and 1985. During this period Toronto airport's international passenger traffic grew from 52 to 57 percent, and its share of major airport international cargo traffic grew from 44 to 53 percent.

Toronto has been able to increase its share of international traffic, largely at the expense of Montreal. The federal government, in recent years, has allowed more overseas carriers to fly into Toronto, in some cases without requiring the carriers to stop in Montreal. Foreign carriers have preferred Toronto to Montreal because of its higher traffic-generating potential and due to Montreal's logistical problem with separate domestic and international airports.

Vancouver, however, will not necessarily remain immune from losses of overseas traffic to Toronto. Current technologies make it possible for carriers to fly non-stop from Pacific points to Toronto. With Toronto's greater population, and better connections to Latin America, Europe, and the U.S., Toronto could, in the future, compete with Vancouver for Pacific traffic. In fact, Canadian Airlines has stated that it would like to add a Toronto-Tokyo route to its system.[15]

In summary, Toronto is well situated as Canada's central hub city, has good international connections, and has been increasing its share of major Canadian airport traffic. In the near future, Toronto could be in a strong position to compete with Vancouver for Pacific traffic.

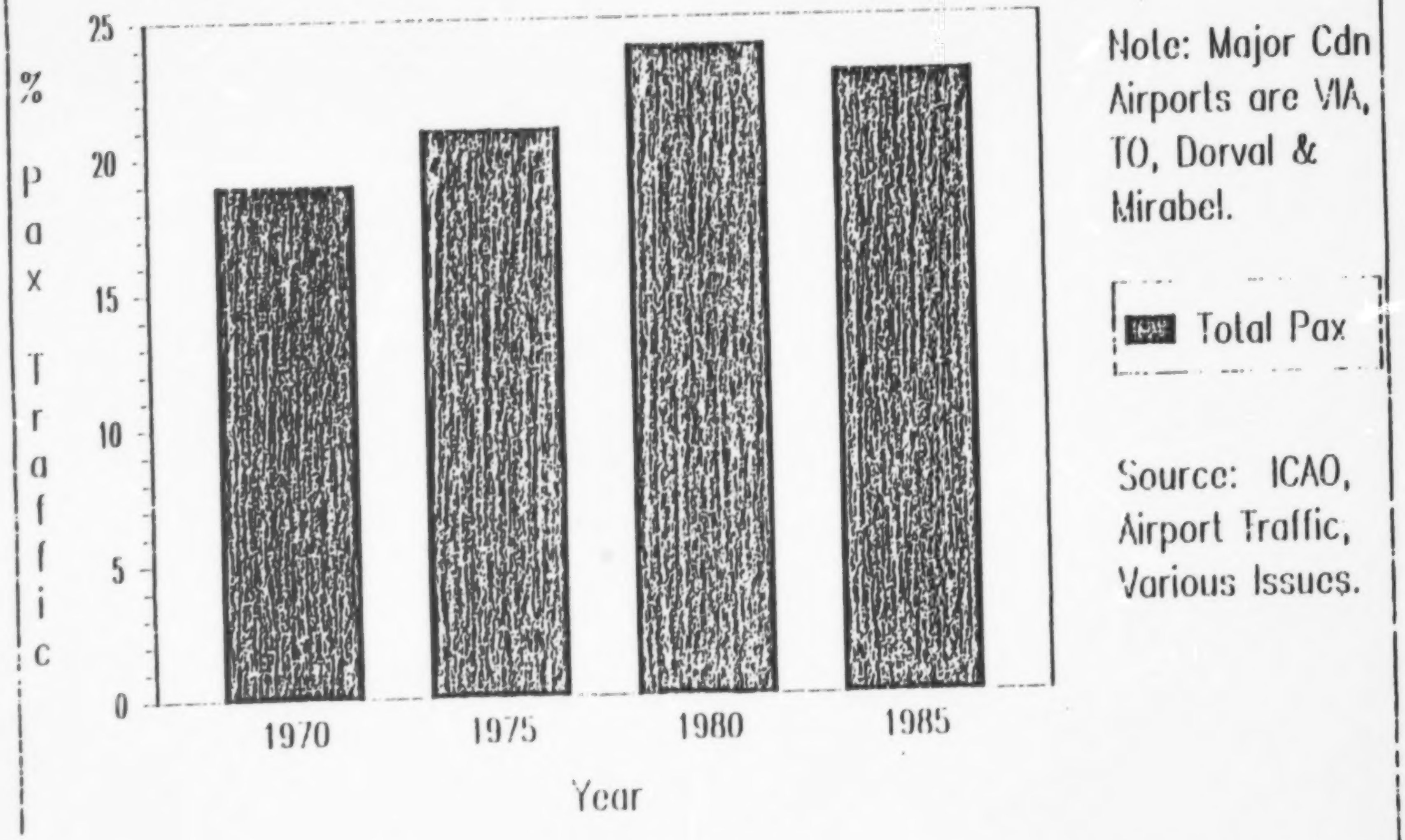
---

[15] Joan Feldman (1987), "Canadian Airlines International: Canada's New Major," Air Transport World, Vol. 24(a), September, pp. 28-35.

Appendix 3-24

Vancouver -- Percent of Total Passenger Traffic

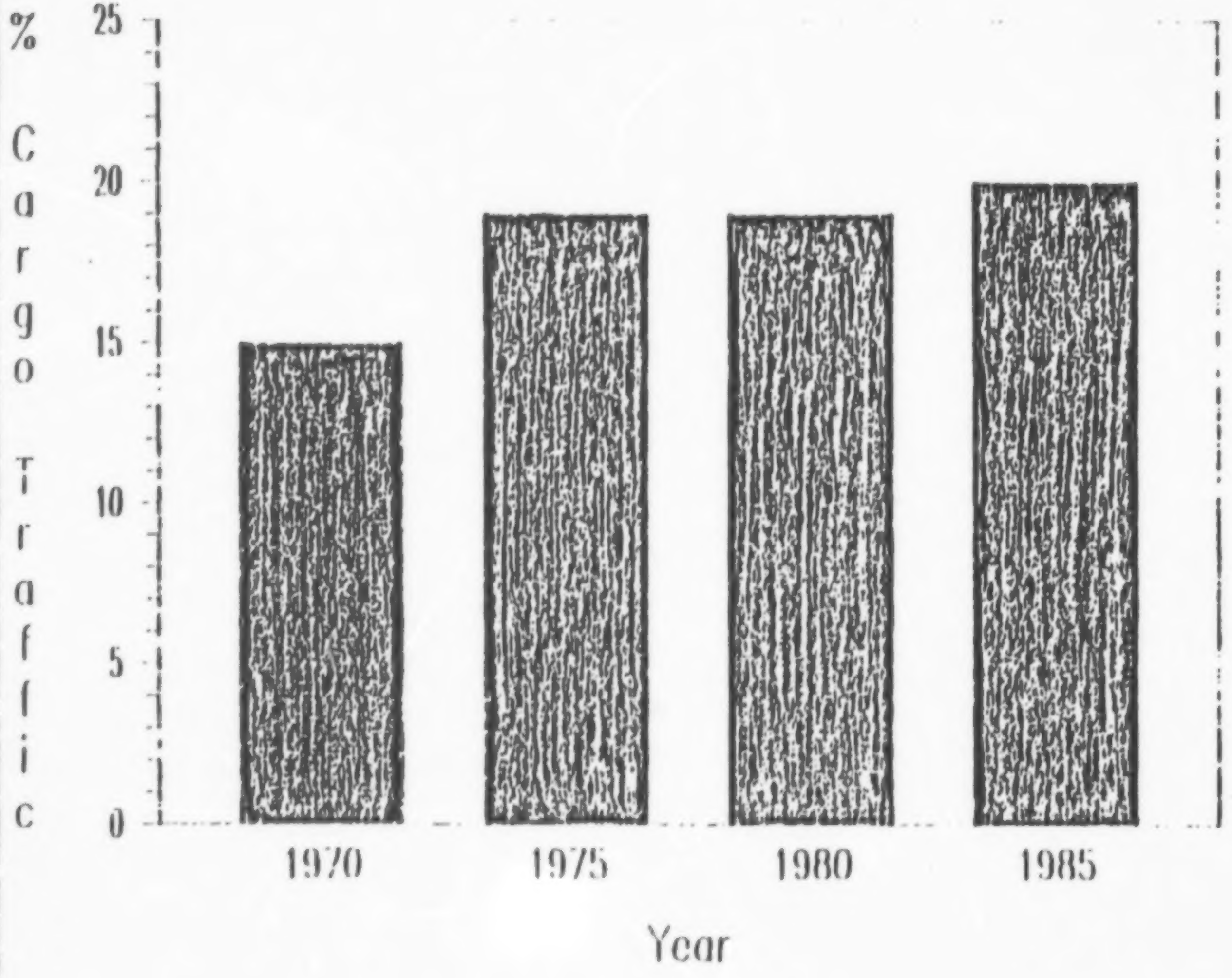
of Major Canadian Airports



Note: Major Cdn Airports are VIA, TO, Dorval & Mirabel.

Source: ICAO, Airport Traffic, Various Issues.

Vancouver – Percent of Total Cargo Traffic of Major Canadian Airports

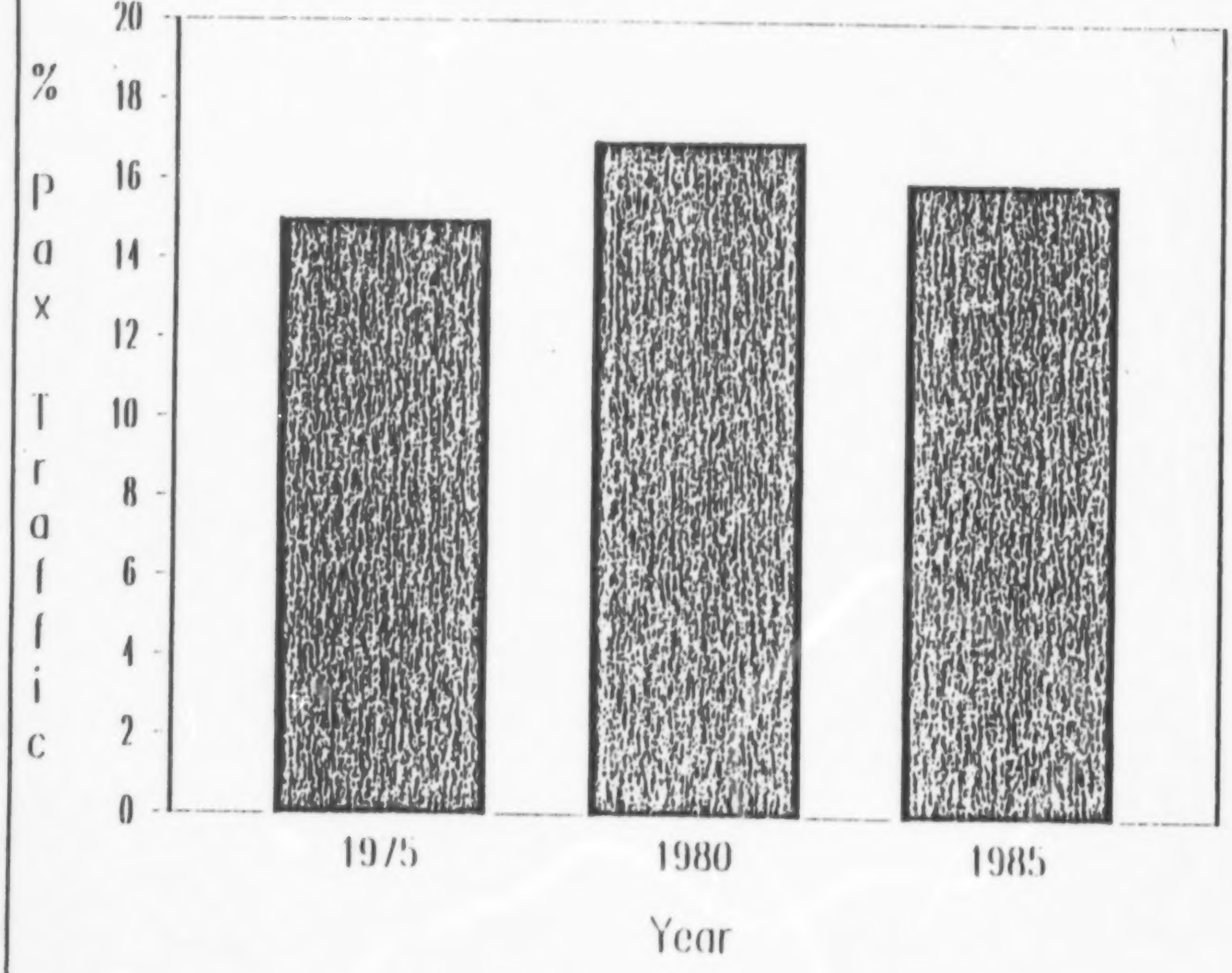


Note: Major Cdn Airports are VIA, TO, Dorval & Mirabel.

Source: ICAO, Airport Traffic, Various Issues.

Vancouver – International Passenger Traffic

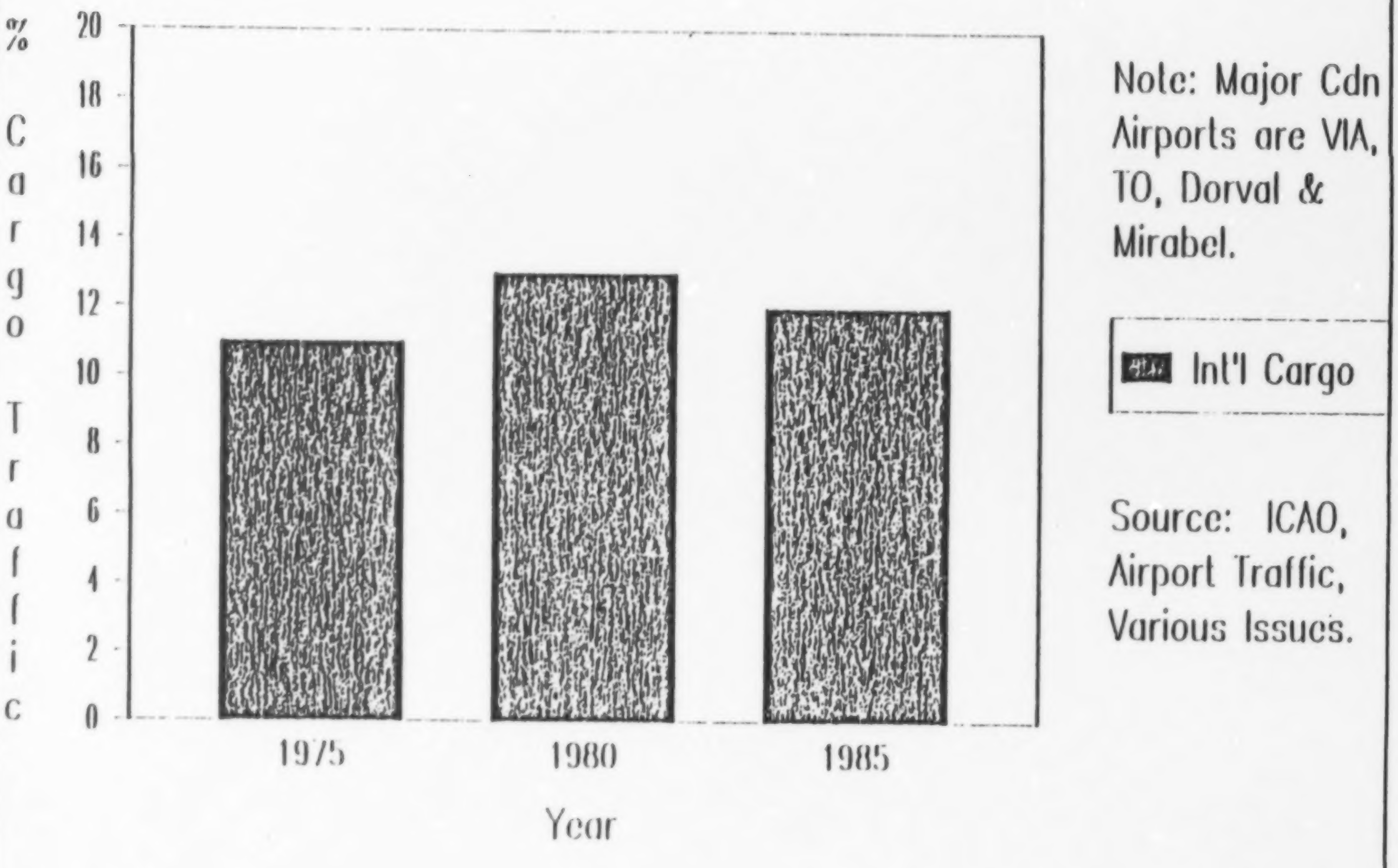
of Major Canadian Airports



Note: Major Cdn Airports are VIA, TO, Dorval & Mirabel.

Source: ICAO, Airport Traffic, Various Issues.

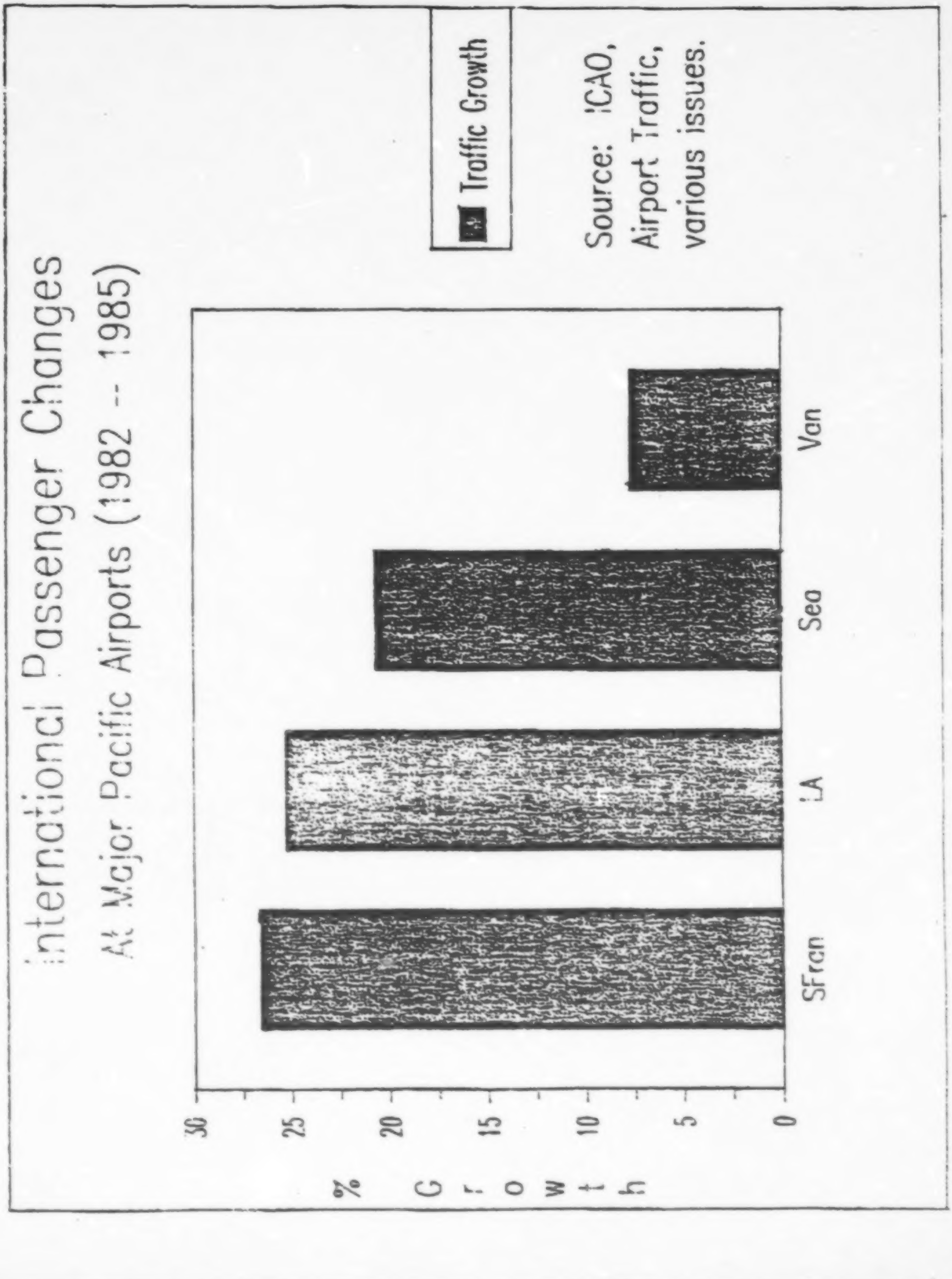
Vancouver -- Percent of International Cargo Traffic of Major Canadian Airports



Note: Major Cdn Airports are VIA, TO, Dorval & Mirabel.

Source: ICAO, Airport Traffic, Various Issues.

APPENDIX 3-28

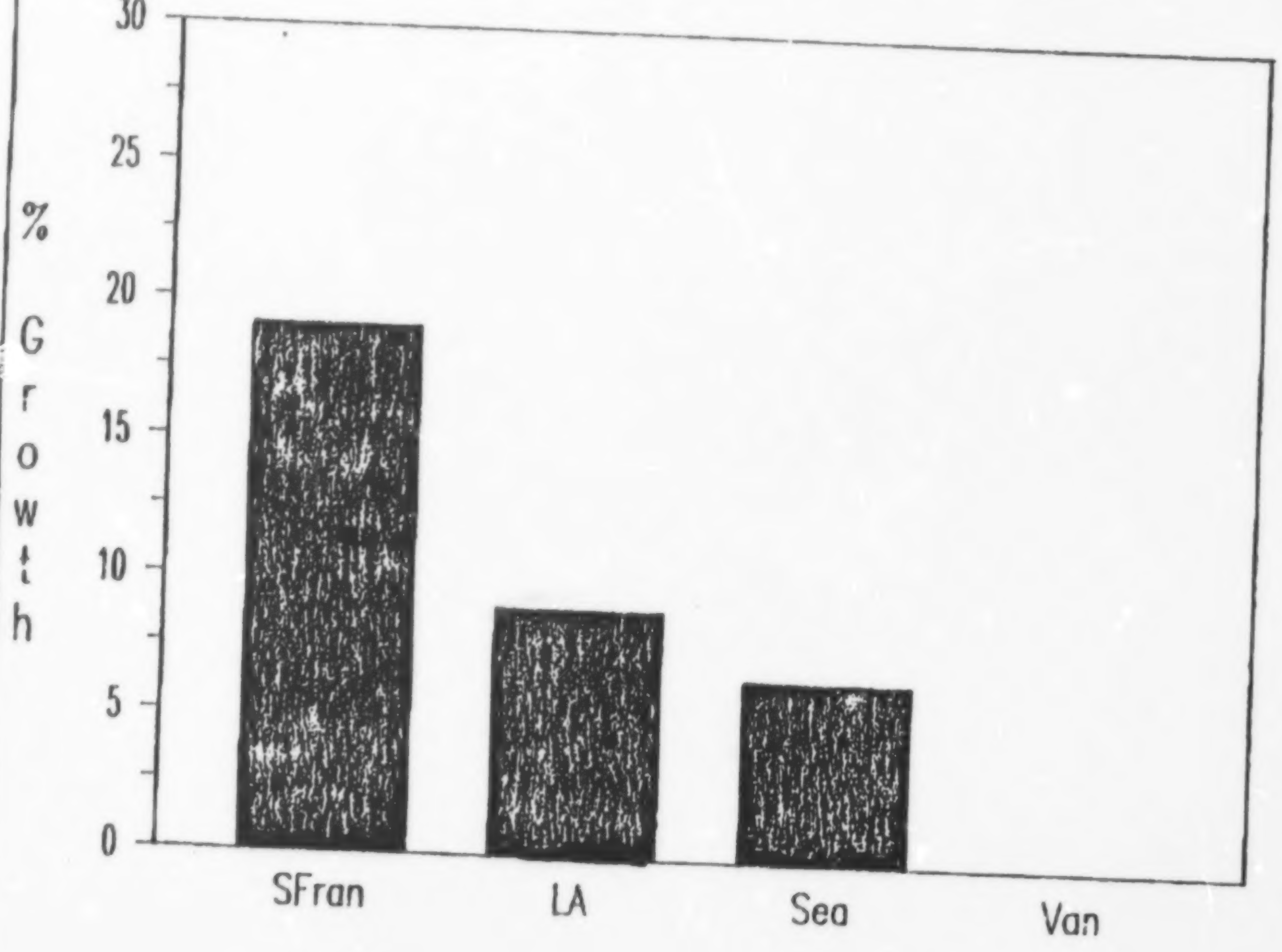


International Passenger Changes
At Major Pacific Airports (1982 -- 1985)

Source: ICAO, Airport Traffic, various issues.

International Passenger Changes

At Major Pacific Airports (1981 - 1985)

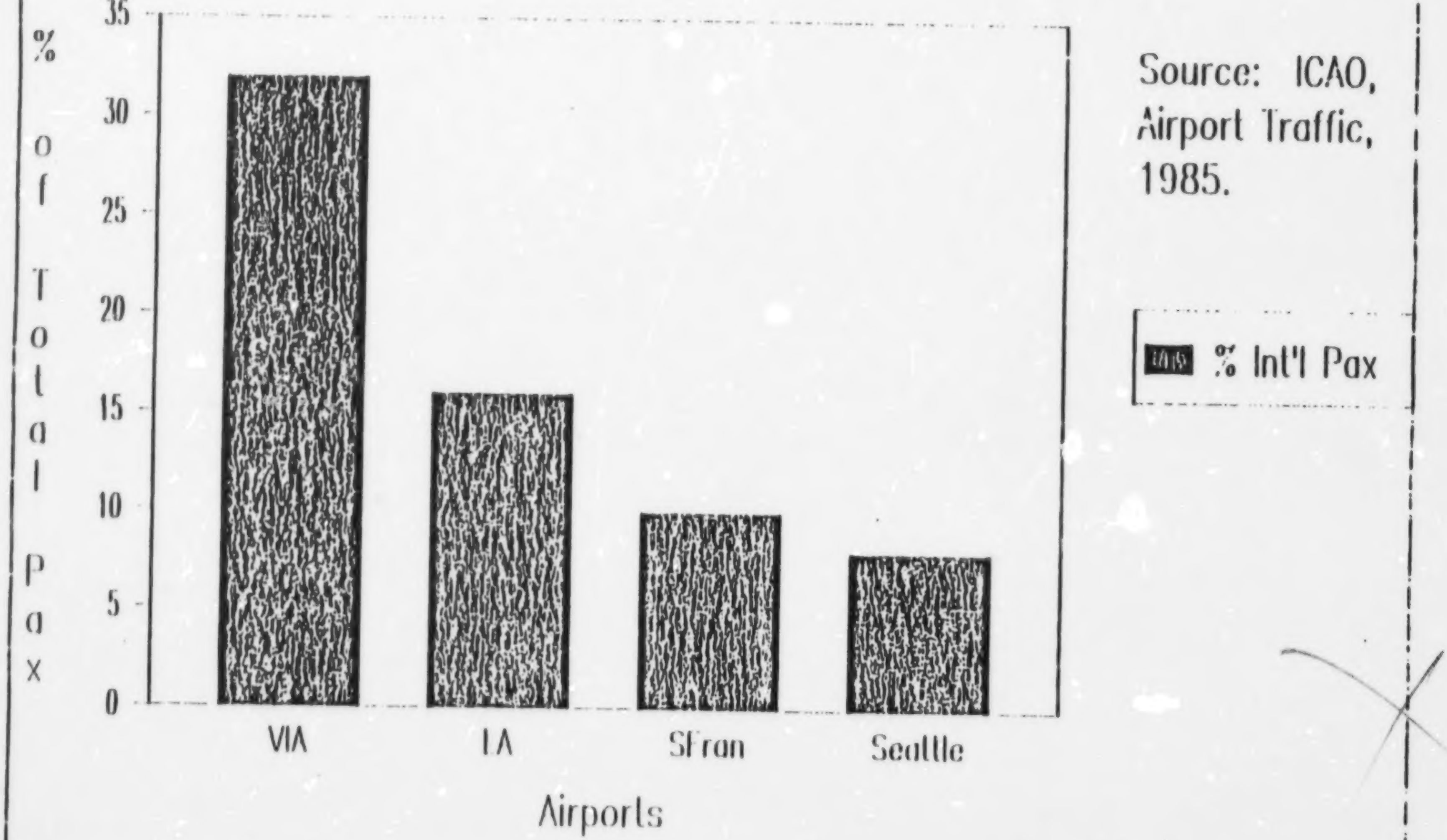


NOTE: Seattle data from airport PR office

Source: ICAO, Airport Traffic, various issues (except Seattle).

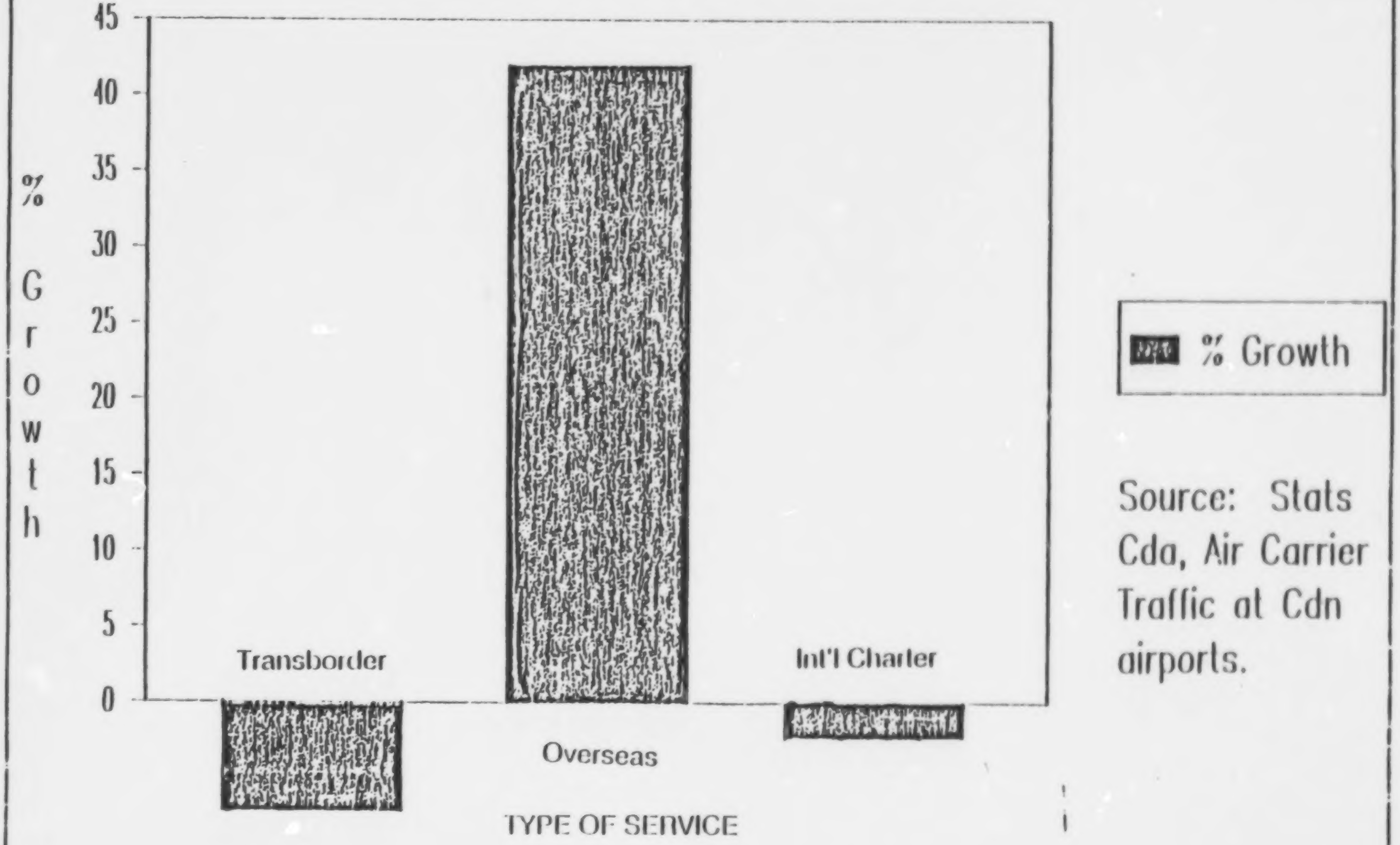
VANCOUVER & U.S. PACIFIC AIRPORTS

Int'l Pax as a Percent of Total Pax (1985)



Source: ICAO,
Airport Traffic,
1985.

Comparison of Growth Rates for Various Types of Passenger Services at VIA (1980-1985)



Source: Stats Cda, Air Carrier Traffic at Cdn airports.

Appendix 3-31

Canada-U.S.A. Bilateral Agreement
Scheduled Routes Permitted from Vancouver and Toronto

Destinations permitted from Vancouver:

- Chicago
- Los Angeles
- San Francisco
- Seattle
- Spokane
- Honolulu

Destinations permitted from Toronto:

- Boston
- New York
- Tampa
- Miami
- Pittsburgh
- Philadelphia
- Buffalo
- Erie
- Detroit
- Chicago
- Rochester
- Cleveland
- Dallas-Ft. Worth
- Houston
- San Francisco
- Los Angeles
- Honolulu
- San Juan[1]

[1] Added in 1984

Note: Additional routes added, occassionally, on an informal basis.

Source: Canada (1974), Canada Treaty Series, No. 18.

Appendix 3-32

Canadian Bilateral Air Service Agreements
(as of June 1987)

Country	Date Signed
Latin America/Carribbean:	
Argentina	May 1979
Barbados	October 1985
Brazil	May 1986
Cuba	September 1975
Haiti	October 1978
Jamaica	October 1985
Mexico	March 1971 (as amended)
Panama	May 1968
Peru	June 1957 (as amended)
St. Christopher and Tabago	August 1970
United States	March 1986 (as amended)
Europe/Africa/Middle East:	
Belgium	May 1986
Czechoslavakia	March 1969
Denmark	May 1958
Finland	May 1986
France	December 1982
Germany (West)	January 1983 (as amended)
Greece	August 1984
Ireland	December 1957 (as amended)
Israel	April 1986
Italy	August 1972 (as amended)
Morocco	February 1975
Netherlands	June 1974
Norway	February 1950
Poland	May 1976
Portugal	April 1987
Romania	Ocrtober 1983
Sweden	July 1949
Switzerland	February 1975
U.S.S.R.	February 1973 (as amended)
United Kingdom	April 1981 (as amended)
Yugoslavia	November 1984

Asia/Pacific:	
Australia	March 1974 (as amended)
China	June 1973
Fiji	April 1974
India	February 1987 (as amended)
Japan	January 1955
New Zealand	September 1985
Pakistan	December 1960
Singapore	June 1984

Note: Hong Kong is covered in the Canadian agreement with the United Kingdom.

Source: Canada Department of External Affairs, "Bilateral Air Agreements in Force Between Canada and Other Countries," June 1987.

Canadian Points Allowed on Traffic Routes As Stated in Bilateral Agreements (as of April 1986)

Country	Points Allowed to Canadian-based Airlines	Points Allowed to Foreign-based Airlines
Argentina	points in Canada	Montreal
Australia	Vancouver	Vancouver
Barbados	points in Canada	Montreal, Toronto, Calgary
Belgium	points in Canada	Montreal
China	points in Canada	Vancouver, Ottawa
Cuba	points in Canada	Montreal, Ottawa
Czechoslovakia	points in Canada	Montreal
Denmark	points in Canada	Montreal
Fiji	points in Canada	Vancouver
Finland	points in Canada	Montreal
France	points in Canada	Montreal, Toronto
Germany	points in Canada	Toronto, Montreal, Calgary, Edmonton, Vancouver
Greece	points in Canada	Montreal, Toronto
Haiti	points in Canada	Montreal
India	points in Canada	Montreal, Vancouver
Ireland	points in Canada	Montreal
Israel	points in Canada	Montreal, Toronto
Italy	points in Canada	Montreal, Toronto
Jamaica	points in Canada	Montreal, Toronto, one point west of Ontario
Japan	Vancouver	Vancouver
Mexico	points in Canada	Montreal, Toronto, Windsor, Calgary, Vancouver
Morocco	points in Canada	Montreal
Netherlands	points in Canada	Montreal, Toronto
New Zealand	points in Canada	Vancouver or Toronto
Norway	points in Canada	Montreal
Peru	Vancouver, Montreal	Vancouver, Montreal
Poland	points in Canada	Montreal
Portugal	points in Canada	Montreal
Romania	points in Canada	Montreal
Singapore	points in Canada	Montreal, Toronto, Vancouver
St. Christopher and Nevis	points in Canada	Montreal, Toronto
St. Lucia	points in Canada	Montreal, Toronto
Sweden	points in Canada	Montreal
Switzerland	points in Canada	Montreal, Toronto
U.S.S.R.	points in Canada	Montreal
United Kingdom	9 cities in Canada	Gander, Halifax, Montreal, Toronto, Winnipeg, Edmonton, Calgary, Vancouver
Yugoslavia	points in Canada	Montreal, Toronto

Sources: 1. Bilateral Agreements

2. McGill University, Centre for Research of Air and Space Law, Legal, Economic and Socio-Political Implications of Canadian Air Transport, Montreal, 1980.

The specific characteristics of the airport can be grouped into the following categories:

a) regulatory constraints
b) airport facilities
c) costs of doing business
d) off-airport factors.

A) Regulatory Constraints

Bilateral Air Treaties. As already discussed, international air routes are regulated by the Federal Government through bilateral agreements (treaties) with other national governments. These agreements determine the routes allowed, the capacity of each route, and the procedures for setting fares. Without new treaties, it will be impossible to attract new foreign carriers to VIA. One exception to this is when an existing bilateral authority is unused, such as Canada-Singapore.

Since bilaterals are negotiated by the Federal Government, local airport authorities can only affect the content through effective lobbying. It is important to remember that the interests of the airport, and of carriers using the airport, may differ. While the airport and the local community will want a high usage level by many different carriers, local airlines will not welcome the additional competition. Current bilaterals reflect the airlines interests, since they have been the major lobby group. For local Vancouver interests to be reflected in future bilateral agreements, regional concerns must be presented to the Federal Government.

The current Canadian airline policies have restricted the choices available to both consumers and air carriers:

- Many current bilaterals restrict the number of carriers on an international route to one from each country, and each carrier is only allowed a single destination in the foreign country.

- The choice of airlines is made by the respective governments, not by consumers.
- Canada has pursued a "spheres-of-influence" policy by dividing the world between Air Canada (which was assigned Northern Europe) and Canadian Airlines International (which serves the Pacific, Southern Europe and South America). This has, until recently, halted expansion of Air Canada into the growing Asia Pacific market. The full effect of the recent change of policy will only be known once the necessary bilateral agreements are signed.
- Almost one-third of trans-Pacific passengers destined for Vancouver do not fly directly to VIA, but rather through a United States gateway.

Customs. An air carrier is concerned with an airports' customs facilities. Hours of operation,ability to handle peak demands and friendliness of personnel are factors. At VIA, passengercustoms is always open.

Hours for freight customs are Monday to Friday, 8:00 a.m. to 4:30 p.m. There are no specialprovisions for courier services; they must wait until morning to clear customs. With these restricted hours freight may be delayed at the airport. Any delay in the clearance of time sensitive air cargo makes Vancouver less attractive.

Free Trade and Taxation Policies. Airlines are influenced by the amount of taxes which they have to pay. Taxation and related policies, such as free trade zones, are going to be important factors. What taxation policies and procedures apply to freight that merely passes through Canada, but is not destined for another country? Should there be a bonded warehouse area at VIA where this type of freight would not be charged customs duties? This issue is reviewed in greater detail later in this Report.

Pricing Regulation. Prices for airline services between countries are governed by the bilateral air service agreements.

For some time, the U.S. has been signing agreements which give carriers much greater pricing freedom than Canada allows. This could be a factor in an airline's choice of airport to serve.

b) Airport Facilities

Airport facilities must be convenient and offer comprehensive services to both the air carrier and passenger.

Terminal Facilities. The passenger terminal building issues must be pleasant, safe, well maintained and respond to such concerns as:

- ensuring the design capacity of the air terminal building has not been reached.
- providing sufficient waiting areas for travellers. Is there enough seating in the waiting areas when large number of flights depart at the same time? Can waiting areas accommodate the large aircraft types favoured for trans-pacific operations?
- ensuring the waiting areas are adequate in terms of comfort. What types of ventilation and lighting are provided? Are there smoking and non-smoking sections? Have enough rest rooms and mother's rooms been provided? Are there sufficient numbers of telephone booths and are any equipped for long-distance calling cards?
- providing amenities in the waiting areas, both in front of and beyond security areas. Diversions such as video and play areas for children, dining, shopping (both duty free and concession/souvenir types), pubs, and other services (e.g., beauty salons and barbers, photo developing, and office services) available at reasonable prices.

- providing adequate information services. Is the paging system at capacity? Are foreign language information or international symbols available?
- providing good facilities for tour groups (e.g., places to meet, tour bus loading zones).
- incorporating systems to help smooth the flow of people through the airport, e.g., use of computers to reduce paperwork.
- providing sufficient counter and office space for the airlines in the terminal.
- limiting congestion at security check locations.

Gate Space. Gates are typically owned or leased by the individual airlines. Gate availability is limited at peak times. If new airline companies want to locate in Vancouver, adequate gates would have to be provided.

Airport Facilities at Gates. Many airports have stores, restaurants and other facilities in the area past passenger security. Some have children's play areas. Vancouver has none of these.

Duty Free Shopping. Duty free shopping in Vancouver is quite limited compared with many other international airports. Many airports have stores at the gates and in the in-transit lounges. Oriental tourists often wish to buy a wide variety of items at competitive prices. Also, some cities have duty free shops in-town, Vancouver has few.

Airport Office Centres. Some airports offer on-site office services -- secretaries, telephones, personal computers, facsimile machines, etc. Some airports have on-site hotel rooms which are rented by the hour. These facilities are currently not available in Vancouver.

Links to Air Network. With the consolidation of the Canadian industry through the recent mergers, more flights schedules are integrated so transfer times to Canadian destinations should be good. However, Vancouver lacks deep penetration routes into the U.S. and the issue of fast transfer times to trans-Pacific flights must continue to be monitered.

Traffic Congestion. Based on some preliminary simulation studies, barring problems with weather and unforeseen circumstances, the average delay for runway use at VIA should be under six minutes. This compares very favourably with American airports such as San Francisco and Los Angeles. As runway capacity limits are reached, VIA has the potential to relocate general aviation to other local airports. The U.S.-Pacific Rim gateways do not have this luxury.

Ground Traffic Congestion. Vancouver International Airport, located on Sea Island, is connected to the mainland through three bridges owned and maintained by Transport Canada. All vehicular traffic, generated by passengers, their drivers and airport employees, must pass over these bridges. These bridges are also used by commuters not associated with the airport causing delays at peak hours. Also, VIA is not directly connected to any major urban freeway system.

Cargo Handling Equipment. The volume of air freight being handled at the airport has been steadily growing. Each of the scheduled airlines brings in air cargo on its flights and maintains its own crews and equipment. Cargo from these flights is handled at the main terminal with the passengers.

A comparison of Vancouver with the U.S. West Coast gateway airports of Seattle, Portland, San Francisco, and

Los Angeles reveals that Vancouver has the same basic facilities and services offered by the other airports. However, Vancouver is much smaller and has deficiencies in facilities and services for international cargo shippers:

- There is no all-cargo aircraft apron adjacent to the terminal.
- There is no main-deck loader available for servicing Boeing 747 freighter airplanes.
- Chillers and freezers are owned by individual airlines with no common use facilities.
- An automated cargo clearance system will likely be needed in the 1990s to assist processing of air cargo.

Maintenance Availability. Airlines will also be influenced by whether or not the type of aircraft they fly can have routine maintenance performed. Presently, each of the airlines has its own aircraft maintenance facilities or contracts the work out to another airline -- normally Air Canada or Canadian Airlines. Therefore, the airlines will be concerned with what types of aircraft are handled by the maintenance crews of Air Canada and Canadian Airlines. The dropping of some aircraft types from their fleets has been good for Canada's two major carriers, but has reduced the types of maintenance services available to foreign carriers.

Container Availability. Typically, individual airlines own their containers. Unlike the case for sea vessel containers or rail box cars, there currently are no pooling arrangements for aircraft containers. Development of pooling could reduce the costs for a new airline.

Ground Handling Services. The airline will need to know whether it can establish its own ground handling services or whether another airline must provide them. At Terminal Two in Toronto, for example, Air Canada has an exclusive contract to provide all ground services.

C) Costs of Doing Business

Local costs are an influence on airline destination decisions.

Fuel Costs. Canada has very high fuel taxes. This makes Vancouver less attractive vis-a-vis Seattle, for example.

Crew Layover Costs. These are the costs of laying over air crews (pilots and flight attendants) and include items such as accommodations and meals.

Maintenance Costs. How much will it cost for routine maintenance? The fact that the existing airlines serving Vancouver have excess capacity could help hold these costs down for the entrant airlines as well as giving new business to the existing airlines.

Landing and Ground Service Fees. Landing fees at Vancouver are the same as other major Canadian airports. Loading bridge fees vary widely in magnitude and structure in Canada. For example, at Toronto the fee is $15 while at Montreal International Airport it is $4.65 for each 15 minute period. Aircraft parking fees also vary among airports. At Vancouver, Toronto and Montreal, monthly parking fee for an aircraft weighing over 300,000 kg is $2,003.50, while at Calgary and Edmonton it is $1,890.00. Also important are fees paid for ground services such as baggage handling and aircraft servicing.

Customs Fees. What are the fees charged by Canada Customs relative to those at U.S. airports? Are fees charged for cargo which just passes through Canada, originating from and destined to foreign countries? Could a free trade zone be established for goods merely passing through Canada?

Taxes. What taxes are charged on the items listed above and on passenger revenues?

D) Off-Airport Factors

Vancouver is Canada's largest port on the Pacific Ocean. It is a cultural and education centre and is a tourist mecca. The city is Canada's West Coast financial, shipping, and industrial centre. It is situated amid spectacular scenery and has pleasant year-round weather. Vancouver is a young city and, as with all Canadian cities, it is very clean and safe. While the city is predominantly British, there are numerous minority groups. Chinatown is second only to San Francisco's on the West Coast. These factors make Vancouver a tourist centre.

Attractiveness of Community. Vancouver has a high standard of living, with many benefits hard to find elsewhere in North America. Both its residents and tourists enjoy:

- clean air and water
- a low crime rate
- a high quality of life
- proximity to many tourist attractions.

Hotels. Vancouver hotel prices are moderate when compared to other cities. Toronto and New York are known for their high priced hotel accommodations. Generally, Vancouver's rates are similar to Calgary, Edmonton and Seattle. However, Seattle has more choice in hotel accommodation. Vancouver is particularly lacking in budget priced accommodations situated near the airport.

Meals. The ethnic range of Vancouver is reflected in its restaurants, with Chinese, Indian, English, French, German, Hungarian, Indonesian, Italian, Japanese, Mexican, Polynesian, Swiss, Thai, Vietnamese and more. The city's coastal location makes fresh seafood low cost and plentiful, especially appealing to the Japanese as sushi is cheaper here than in Tokyo.

Cultural Diversity. With Vancouver's many diverse ethnic groups and Canada's cultural mosaic, rather than the U.S. melting pot, tourists from many lands can feel comfortable.

Local Tourist Attractions. Vancouver has many local tourist attractions:

- numerous provincial parks which offer camping and hiking
- plentiful local skiing
- many golf courses
- sailing and ocean swimming
- many botanical gardens and city parks complete with tennis courts, swimming pools, bike routes, and lawn bowling greens
- Museum of Anthropology, Maritime Museum, Planetarium, Art Gallery, Aquarium, and the Arts, Sciences and Technology Centre
- professional baseball, football, and hockey teams

- thoroughbred horse racing and automobile and motorcycle races
- various festivals during the summer.

Links to Out-of-Town Attractions. One of Vancouver's strengths is its proximity to many major tourist attractions:

- This fall, a new air link with the ski resort of Whistler will be introduced.
- There are air and/or ground links to Whistler, Banff, Jasper and the Calgary Olympics.
- Some of the world's best fishing is in Northern B.C.
- Vancouver is a starting point for cruises to Alaska. Many of the cold water West Coast cruise ships start from Vancouver or Victoria, with just a few located in Seattle. There are some one-way cruises: drive/cruise on ferry type ships or fly/cruise packages where tourists fly into Seattle, bus to Vancouver, cruise to Alaska, and fly back to Seattle. If a direct Vancouver-Alaska air link was available, this package would not have to include Seattle. Currently, there is some concern that cruise lines may relocate to Seattle for this very reason.
- White-water rafting trips are available in summer and helicopter skiing in winter.

For tourists travelling in the rest of B.C., the better the connections to other modes of transportation and the easier it is to make the connection, the better it is for the airport. If people abroad can book a complete vacation, in a comfortable style, they will fly into Vancouver and British Columbia. The airport must be sold as part of a complete package.

Shopping. Downtown Vancouver has a number of department stores, malls and tourist shopping areas. While no longer restricted by city bylaws, many stores are open every day of the week, with only a few hours on Sunday and evenings. Vancouver shopping hours are still limited compared to Seattle and other American cities. While Robson Street features many high fashion boutiques, Oriental tourists like to buy haute couture fashions unavailable here.

Night-Life. Vancouver supports a symphony orchestra, opera company and several theatre groups. However, B.C. also has restrictive drinking laws and pub hours. Night life in general is fairly limited, especially relative to major U.S. gateways such as New YorK, Los Angeles, and San Francisco.

City Languages. Canada is a bilingual country and Vancouver has many minorities. Many businesses offer services in languages other than English. Many branches of banks around the city post list of languages spoken there. This is a strength of Vancouver relative to most other North American gateways.

Currency Exchange. Many banks carry only British Sterling and American Dollars at their branches. Any other cash to cash exchanges must be conducted through the main downtown branch. While there is no transaction charge, there is a collection fee at the branches and delay if one wants to exchange currency other than British or American.

There are foreign exchange houses in the city. One uses the New York Exchange rate, and has a transaction charge of $2.00 for amounts up to $200.00 and 1% thereafter and is open 9 a.m. to 5 p.m. Monday to Saturday. At the airport BAnk of America has a foreign exchange booth open seven days a week, 5:30 a.m. to 9:30 p.m. Their fees are $2.50 to $200.00 and 1.25% thereafter to a maximum of $10.00.

Convention Facilities. Vancouver's convention facilities are quite recent. It is not yet clear if the lgistical system is in plate to successfully handle large conventions.

VI. Case Studies of North American Airports

This section presents programs, ideas, and the workings of nine North American airports: New York, Seattle-Tacoma, Toronto, Portland, San Francisco, Los Angeles, Dallas-Ft. Worth, Miami and Bellingham.[23] Most of the information presented is based on telephone interviews with various individuals at the various airports. In general, the following topics are addressed: marketing management structure, how marketing is undertaken, recent trends/events, market niches/specialties, opportunities exploited, and opportunities foregone. Views on airport authority structures were also solicited.

A. John F. Kennedy/La Guardia/Newark International Airports

The three airports, John F. Kennedy, La Guardia, and Newark are all jointly owned and operated by the Port Authority of New York and New Jersey.[24] The Port Authority controls these three airports as well as a number of other transportation facilities.

Marketing. The marketing activities of the three airports are collectively overseen by the Aviation Marketing and Economics Department. This centralized group directs the advertising, community relations, promotion, and the marketing and planning of the airports. This group is unique in that it is a bi-state agency and as such must promote both New York and New Jersey interests.

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[23] Bellingham, despite its small size, is in the process of trying to shift the air transport logistical system to it's advantage at VIA's expense.

[24] Port authorities are legally chartered institutions with the status of public corporations that operate a variety of publicly-owned facilities. They have considerable independence from state and local governments because of their ability to issue their own debt (usually revenue bonds), and because of the extent of their revenue bases, which may include fees from marine terminals and airports as well as proceeds from other port authority properties.

The Port Authority's aviation unit employs approximately 1850 people. The centralized Aviation Marketing and Economic Division of the Port Authority employs about thirty-three professional personnel. The centralized aviation marketing group is divided into four main units and engages in budgeting and financial analysis activities as well as marketing. The marketing groups are designated as the a) market research unit, b) market planning unit, and c) market promotion unit.

The market research unit performs a number of tasks. It compiles passenger and cargo statistics, develops monthly passenger and cargo reports, liaises with the various carriers who supply their data, produces internal and external reports, compiles revenue data, performs surveys, and does all basic market research. This group is known for its in-flight surveys.

The market planning unit develops an annual marketing plan for airports. This group sets the marketing strategy and coordinates with all three airports so that the plan is undertaken properly. In addition, this group identifies market trends, notes failing or rising market shares, and recommends marketing strategies to the executive management. The marketing plans are implemented by the market promotion unit.

The market promotion unit is responsible for all the advertising and promotional efforts of the three airports. This unit employs a New York advertising company which supplies a full range of services such as media attention, promotion efforts, public relations as well as community relations. Currently, this group has a large budget for advertising (which includes consulting costs) totalling $US 4 million for the three airports. Their advertising efforts will range from media to public relations to community awareness.

The marketing promotion unit not only works at promoting and informing people about the various airport services and amenities, but it also sees that it has a responsibility to keep people informed about public transportation and ground side services. For example, when Pan Am Airlines developed a new water shuttle service (which is basically a fast ferry ride from La Guardia Airport to downtown Wall Street), the marketing promotion group ensured that the public knew that such a service existed by developing a brochure for Pan Am to publicize this service.

An interesting service also provided by the marketing promotion unit is its annual tour package and gateway program. Tour packages are programs to promote increased travel through the New York and New Jersey region. The tour package programs are directed at two different groups. The "Broadway to Boardwalk" program is designed to attract long term vacationers. This program describes various features and attractions and provides coupons for various restaurant/sites around the New York and New Jersey region. The "On Your Way, Stop Over" program is aimed at people who are travelling to Europe. This program encourages these travellers to use New York/New Jersey as their launch point to Europe. It invites people to stay overnight in New York or New Jersey and to see a few of the sites before heading off to Europe.

The gateway program is devised to promote New York and New Jersey as the premier gateway to the United States. The "Gateway America Program" is aimed at both passengers and cargo groups. There are two programs: Passenger Gateway America, and Cargo Gateway America. The marketing promotion people travel overseas to promote the New York and New Jersey airports. While overseas, they hold workshops explaining cargo and passenger facilities/groups. This is when the marketing group informs potential shippers about customs brokers, freight forwarders and the like. In addition to these trips, the group utilizes trade development offices in Europe and Asia and works with these offices to promote the two states. The major carriers often act as sponsors for some of the marketing promotion group's activities.

The three marketing units are well coordinated with each other. There is a natural and logical progression of their activities. The market research unit collects the data; the market planning group takes this data and develops marketing plans from it; the market promotion unit implements the marketing plan.

Marketing strategies. The marketing strategies are fairly flexible and depend upon what changes have or are expect to take place. From their data analysis and research, the marketing groups try to forecast needs and changes. Data collected from the various in-flight surveys are analyzed closely.

Because the Market and Economic Division represents more than one airport, the marketing group must market all three airports fairly. In some cases this is not entirely possible. Each of the three airports have their own particular strengths and weaknesses. La Guardia's strength lies in its short and medium haul type services (commuter flights). Newark provides the largest domestic services. John F. Kennedy Airport (JFK) provides the most international service. Recently, the marketing group noticed that the level of domestic service into JFK airport was not as strong as it could be. The domestic service was seen as being the key in providing connections for international flights. As a result, the marketing group currently promotes JFK Airport at the expense of the Newark Airport in order to maintain the international market shares.

Airport facilities. The three airports move the highest volume of cargo in the United States. Approximately 1.4 million tons of cargo are shipped into New York and of that approximately 850,000 tonnes are international traffic. It's been estimated that 98% of this international cargo traffic is moved through JFK Airport. Newark Airport, a domestic orientated airport, specializes mostly in small package cargo. UPS (United Parcel Service) has a major sorting facility at Newark Airport. New facilities are being constructed at this airport. La Guardia moves very little cargo, if any. Most of the cargo through these airports are origin-destination shipments.

JFK Airport currently has under construction new facilities. Four hundred thousand square feet of facilities are being built, some of which will be dedicated cargo space.

It is anticipated by the year 1992, there will be one million square feet of facilities available at JFK Airport. Of this one million square feet of space, there are hopes to develop short-term handling facilities to move perishable goods. This is a market that the aviation marketing group would like to enter and will encompass the movement of fresh flowers, fish, furs, chocolates, and similar type goods.

Foreign trade zone.[25] JFK Airport was designated a foreign trade zone in 1984 but at this time it is still non-operational because the land necessary for this facility still needs to be leased from the City of New York. The original intent of the FTZ was to increase and attract international cargo but to do so requires special markets. In marketing's estimation to be worthwhile, the FTZ will have to make cost-effective use of space. The problem is that there is no space! There is a need for storage areas on the airport site for warehousing of goods and JFK Airport just cannot obtain it. All three airports are at capacity.

B. Seattle-Tacoma International Airport

The Seattle-Tacoma International Airport is owned and operated by the Port of Seattle. The port authority controls the airport and the port facilities.

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[25] Foreign trade zones (FTZs), often referred to as free trade zones, are areas where companies may ship products to postpone or reduce customs duties or taxes. Products remaining in the FTZ are not subject to duties or taxes until they are reshipped out of the zone into the country of destination. Within the FTZ, firms often may process, assemble, sort, and repackage the product before reshipment.

While there are potentially many benefits in using a FTZ, most FTZs are underutilized, with space going to waste. The facilities, services offered, and quality of FTZ management vary significantly. Management wishing to utilize an FTZ will have to explore each zone specifically in order to determine its potential usefulness.

From: Lambert, Douglas M. and James R. Stock, Strategic Logistics Management Second Edition, Richard D. Irwin Inc., Illinois, 1987, p. 675.

Marketing. The Port of Seattle has an Aviation Marketing group that works to increase the volume of traffic moving through the Seattle-Tacoma International Airport (Sea-Tac). With the advent of deregulation, the Port was concerned about attracting new airlines and/or losing airlines currently providing service to the Seattle-Tacoma area. Plans were needed to develop tourism and cargo programs to attract airlines.

The marketing group consists of one person, Dave Rystrom, who holds the position of Aviation Marketing Manager. He answers directly to the Director of Airports. Rystrom has worked for the Port of Seattle for the past fifteen years in various capacities and was key in bringing about a number of innovations at the Port. Whether by intent or by circumstances, there is no support staff provided by the Port Authority for aviation marketing. Rystrom relies upon his experience, knowledge and friendships/contacts built up through 17 years involvement in the transportation industry.

A great degree of autonomy has been granted to Rystrom. Much of this work is based on his initiative. The decision making process is relatively swift and bureaucracy free. Rystrom makes decisions on every day items (e.g. arranging a contract for service). In certain situations, his decisions must be approved by higher authorities. For example, if a deal involves obligating the airport to spend a lot of money to provide the service or there is a question of legality, then Rystrom's decision must be presented to the Director of Airports for final approval or sent to the legal department for their legal opinions before action.

The majority of Rystrom's time is spent talking with freight forwarders, accounts, airlines, reading trade magazines to keep up-to-date in the international scene, and thinking about new ways to increase the volume of traffic moving through the airport. A minor amount of time is spent giving presentations to industry groups, answering inquiries and some consulting. He has provided consulting service for airlines, railways and steamship lines. As long as his advice doesn't cost the airport money, he's allowed to provide consulting services. He's there to give advice freely.

Aviation Marketing does not advertise the airport's service because it believes the services it offers are too technical to advertise like you would product like you would product such as shoes or soda pop. Most of the marketing is done on a personal basis.

Marketing strategy/philosophy. An entrepreneurial point of view is taken by Aviation Marketing. The basic concept of understanding your client's business and understanding your own business and trying to marry your services to the client's needs is adhered to.

Strategic niches/markets. The Port of Seattle offers a combination sea-air service from the Far-East to Europe and this is what they think they can do better than anyone else. Seattle offers 8 days sailing to Port of Seattle (2 days shorter than other U.S. ports), a product that is 50% faster than all water transport and 50% cheaper than all air transport. All types of cargo like electronic goods etc. are moved in this manner. The key is being able to move the cargo from the port to the airport and then onto the airplanes as swiftly as possible. No delays are allowed. The airplanes exist on tight schedules and only make money while airborne.

Airport facilities. Sea-Tac Airport is one of the few airports (and the first major airport to do so) to have purchased its own main deck loader. This particular piece of expensive cargo handling equipment is used to load/unload cargo from the main deck of jets and was purchased approximately 5 years ago. Most loaders purchased can only handle 40,000 lbs. Sea-Tac's loader can handle 60,000 lbs. It is leased out to different airlines on a first come, first serve basis. Sea-Tac's main deck loader has a regular maintenance program. Ordinarily, airlines purchase this piece of equipment themselves and operate it on a deferred maintenance program. The airlines that purchase these loaders are not likely to lease it to their competitors and run the risk of equipment failure at inopportune moments. The main deck loader is seen as an attractive feature by airport users.

Cargo service. As mentioned earlier, the Port offers a sea-air service from Far-East to Europe.

Customs. U.S. Customs service is available 24 hours a day for both passengers and cargo. The customs service for cargo shipments is a special arrangement with the U.S. Customs people and the airport. If customs service is required for cargo shipments outside of normal working hours, then there are extra charges because it's viewed as overtime. If the shipper wants the goods cleared outside of normal hours it is possible but they must pay for the service.

Rystrom enjoys a good relationship with the Customs group because of his own U.S. Customs background. He understands the concerns of the customs people as well as the airport's needs. Because of his customs background, he was able to work with customs to automate cargo documentation procedures. Some Japanese shippers were interested in moving goods through Seattle but they wanted to be able to move the goods within a 5 hour time period. Usually international cargo documentation takes hours (all day) to prepare. Rystrom worked with U.S. Customs to develop a system (computerized) that would prepare the documentation in 2 minutes--Seattle has the pilot project to operate this customs clearance procedure.

Foreign trade zones. Seattle has been designated a foreign trade zone (FTZ) for many years but it has not been fully utilized. It had been cheaper to pay duty than operate within the FTZ. Now with the state of the Japanese YEN and the desire of Congress to address the Balance of Payments problem, interest has been rising in FTZs and people are beginning to look at them more closely. The Japanese are now showing interest in FTZs because it may be cheaper for them to assemble goods in the U.S. and also it would simplify the use of American parts in their products as well. The port sees its role in helping companies utilize the FTZ as simply providing the facility, leasing the space and doing the paperwork.

Computerization and automation. The airport has been described as highly automated, but some regret was expressed that it was not more highly automated. In the area of computerization, Rystrom mentioned wanting to link brokers, truckers, and rail in a single system but there was not the in-house expertise available. Details and clarification of this service were not given.

C. *Lester B. Pearson Airport (Toronto)*

Toronto's Lester B. Pearson Airport is federally owned and controlled. Transport Canada operates the airport for the Canadian Federal Government.

Marketing. Lester B. Pearson Airport has a marketing group but it does not actively market/promote the airport because the airport is at capacity. The marketing group consists of 14 people and manages the contracts/leases and terminal/land use of the terminals and facilities. There are plans in the future to change the structure of the marketing group but no details are currently available as to what changes will be made except that the marketing group will be reorganized into product line management and profit centre management groups. There appeared to be a lack of knowledge or an unwillingness to give out details of the expected changes.

Airport facilities. The airport is currently at capacity and appears that it will only be expanded if the private sector will undertake construction and operation of a third terminal. Transport Canada takes mainly a landlord role in the movement of cargo at the airport. Space is leased out to the airlines and other cargo handling business and they operate under their own management except for adhering to Transport Canada regulations.

Computerization. Customs service is available on a 24 hours a day basis and customs service for cargo is available only during normal working hours.

Computerization. A certain level of computerization has been attained by both customs and airlines but there were no details as to what type of usage was enjoyed.

D. Portland International Airport

Portland International Airport is owned and controlled by the Portland Port Authority. The Portland Port Authority operates both the airport and port facilities.

Marketing. The port authority created the aviation marketing group at the end of 1981 to handle the marketing of the airport. It presently has two full-time employees. Though the aviation group is supported by a centralized public relations department that handles the needs of both the port and airport, a few more full-time research staff would be well-utilized. The marketing group's efforts are focussed on five main areas: local, business and industry groups, regional, national and international.

The main jobs of the marketing department appear to be a) keeping the various interested groups aware of the different new and established services available, b) improving domestic air service and analyzing the various markets they compete in order to maintain what market shares they have already, and c) also maintaining community relations.

A major portion of the marketing group's time is spent keeping various groups informed about airport services and listening to their needs and suggestions. For instance, the marketing group works with travel agents in the Pacific Northwest by informing travel operators about what the airport is currently offering and what new services can be offered. The travel groups in turn keep the airport informed about what services/packages they would like to see. Also, to maintain good working relationships with the various travel agents, members of the marketing group make personal visits to their offices. Business and industry groups who have been identified as frequent flyers are kept up to date about new services.

Any publicity required by the airport is handled by a centralized public relations office that handles the publicity for both the port and airport. It appears that most of the Port Authority's attention is directed at its port facilities rather than it's airport.

Airport facilities. Until recently, the airport largely handled only domestic travel. Through the aviation marketing group's efforts, Portland Airport now offers a new international service--Delta Airlines non-stop Portland to Tokyo service six days a week. As a result of this new international service, the airport has had to upgrade their customs areas and international travel facilities. Previously, customs service was offered on an as needed basis.

Air cargo is not a major business at the Portland Airport. There was no mention about future cargo service. Cargo facilities are neither computerized nor automated because the volume of cargo would not justify the equipment and/or systems.

Aircraft maintenance facilities are maintained by the various airlines that operate at Portland Airport. Airlines not having their own maintenance facilities at Portland are able to contract out their requirements to the airlines that operate maintenance facilities.

E. San Francisco International Airport

San Francisco International Airport is owned by the City of San Francisco and operated by the San Francisco Airport Commission.[26]

Marketing. The San Francisco International Airport does not have a marketing group. This airport seems to have the general attitude that if people needed their services, they will come: there is no need to market or promote this airport because San Francisco is such a popular spot. The fact that San Francisco is a popular destination is attested by the average 1400 flights per day.

In place of a formal marketing group, the airport has a community affairs office and a public relations office that takes on some of the task of keeping the public informed about various services or amenities offered by the airport. All marketing inquiries are directed toward the community affairs office. This office offers maps and general information about the various passenger and cargo terminals, transit guides and schedules, annual reports, guides to different restaurants and facilities on or near the airport, and is the home of various airport related exhibits. The community affairs office handles any media inquiries about the airport and nearby airports as well. During the Los Angeles earthquake much of the media questions were handled by this office.

From contact with the community affairs office, it seems difficult to obtain information about this airport and its operations because the knowledge is not on hand or the people aren't sure where or to whom the questions should be directed. All inquiries about the marketing of this airport were routed to this office. The administration offices at the airport do not have a marketing group of any form; inquiries to their offices were routed back to the community affairs office. Many of the questions asked about the airport were not answered adequately and many cases, the answers were the reply was "I don't know". Based on these uninformed responses, San Francisco appears to be an example of what not to do when marketing an airport.

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[26] A typically municipally-operated airport is city-owned and run as a department of the city, with policy direction determined by the city council, or in some cases, by a separate airport commission or advisory board.

F. Los Angeles International Airport

Los Angeles International Airport is owned and operated by the City of Los Angeles. The airport is managed by the Los Angeles Department of Airports. The department controls three airports in total: Los Angeles International, Ontario International, and Van Nuyes Airports.[27]

Marketing. Los Angeles International Airport does not have a marketing department. Any marketing and promoting of the airport is handled by the Public and Community Relations Bureau of the Los Angeles Department of Airports. The Public Relations and Community Bureau has a total staff of 12 and handles all the community relations and promotional activities for the airport. Promotional efforts for the airport are done on a project basis. No particular person is assigned to promoting the airport.

The bureau has 4 professional staff handling the Los Angeles Airport. The office serves a Director, Assistant Director, Principal Public Relations Representative and a Principal Community Relations Representative and their support staff. Their efforts are concentrated on the cargo area. The bureau does not heavily concentrate on promoting travel/tourism because so many people travel to Los Angeles already (eg. 41.4 million passengers travelled through Los Angeles Airport last year and an estimated 46 million passengers are expected this year). Also, travel promotion by the bureau is minimal because the convention centre is seen responsible for this area.

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[27] Ontario International Airport is located approximately 60 miles east of the city centre. It has scheduled air service and a few international flights. Van Nuyes Airport serves general aviation traffic (i.e. corporate jets and private aircraft).

The bureau organizes trade shows and promotional tours. For the promotional tours, the bureau gives presentations to audiences of freight forwarders, airlines that serve the foreign city and Los Angeles, and any other interested groups. Through a combination of personal contacts, video tapes, and media exposure the bureau tries to interest the groups into utilizing Los Angeles Airport's facilities. The bureau's intent is to show interested users what is available at Los Angeles; they do not provide information about the different groups already operating at the airport. The bureau's role is only to show what is available at the airport but not necessarily help interested groups move their cargo.

Computerization. The customs and cargo areas are computerized but the exact level of computerization is unknown.

The airport management considered developing a central computer system to speed up cargo handling through customs for all the different cargo groups but the project was not undertaken for a number of reasons. Some of the cargo handling groups (airlines and the like) already had their own systems in place and were not inclined to switch systems. Another reason for not developing a common computer system was a proprietary information problem. It was felt some groups might use the information available on the system to their advantage and the detriment of others.

Customs. The public relations office was unable to provide information regarding the customs facilities/hours at the airport. Phone numbers for international and cargo customs were provided.

Cargo. All types of merchandise are moved through this airport, including livestock and cars. The airport was described as an origin-destination airport in that approximately 85% of the cargo is destined for the Los Angeles area. The various cargo groups operating at Los Angeles Airport develop their own facilities.

G. Dallas-Ft. Worth International Airport

The Dallas/Ft. Worth International Airport is jointly owned by the cities of Dallas and Ft. Worth, Texas. The airport is relatively new having only opened in 1974. It is run by an Airport Board which is a public corporation. The 11 member Airport Board is appointed by city council. The Executive Director of the airport answers to this board. The airport employs 1400 people and is totally self-supporting (i.e. it supplies all its own services) but must approach the cities to ask them to raise taxes to support airport projects. The Airport Board, unlike an airport authority, lacks the ability to imposes taxes.

Marketing. The Dallas/Ft. Worth International Airport has a marketing group consisting of two people. The marketing group was created in December 1984. Their purpose was meant originally to increase international airline traffic but they found themselves spending most of their time in lobbying efforts instead.

The marketing groups sees its responsibility to provide information on how to ship through the Dallas/Ft. Worth cargo centre. It sees its role as helping companies use the airport. In addition, it has worked at identifying keys markets and has done general promotion of the airport, cargo facilities and distribution network. Promotional activities are done at trade shows.

The marketing group works with the convention and tourism groups to obtain leisure markets. The marketing groups provides information on how to use airport facilities and how to connect with other parts of the logistics networks (eg. cost of taxi and available bus service). In addition, the marketing group has also participated in joint promotions with the regional convention bureau to increase overseas and local travel to Texas. Most of the work on these promotions are done by the convention bureau and not the airport marketing group--they're just tagging along. Sophisticated marketing tools are utilized (eg. video tapes).

Marketing strategy. The marketing group wants to improve the level of service currently provided at the airport, attain more international traffic, and to promote their cargo centre. They foresee potential markets in the Far East, Canada and in South America. The Far East is their biggest target and they hope to increase service as well as the number of destinations flown to from Dallas/Ft. Worth. There are various points in Canada they would like to have flights to, but these are dependent on modifying bilateral agreements. As the economy of South America stabilizes, they hope to increase the level of service from their airport.

Foreign trade zone. The airport has a foreign trade zone and the marketing group works to promote it in a number of ways. The marketing groups prepares information seminars, presentations, and brochures for the FTZ. They are there only to provide information on how to use the facility --they provide nothing else.

Computerization. Approximately 95% of the airlines using the airport are computerized. The largest and most sophisticated systems are used by American Airlines. The computers are used to book passenger and freight. It is also used as a selective management tool by some of the airlines (eg. create rates for specific routes).

H. Miami International Airport

Miami International Airport is owned and run by Dade County in the state of Florida. The airport is managed by the Metro Dade County Aviation Department which is part of the county government. The airport is self-supporting in that taxpayers' dollars cannot be utilized for the airport.

Marketing. Miami International Airport does not have a formal marketing group nor is it marketed by any other department within the county government. All marketing inquires were directed to the Public Service Office of the Aviation Department. Questions regarding the types of airport cargo facilities and services available were re-directed to the Cargo Development office of the Aviation Department.

The airport does not specifically seek out nor try to attract cargo to the airport. The airlines flying into the airport and the services that they offer attracts the type of cargo handled at the airport. For example, a large amount of cattle charters were being handled at Miami Airport. The airlines providing this type of service utilized older aircraft but with changes in regulations, these aircraft could no longer be utilized. Cattle charters are still handled at the airport but their volume has declined.

The major type of the cargo shipped through Miami Airport are perishable goods. The largest portion of these perishable goods moved are cut flowers from the Central and South American countries. The flowers make up 25% of the total volume of cargo shipped through the airport.

For geographic reasons, Miami Airport sees itself as becoming the gateway to the U.S. for the Central and South American countries.

Airport facilities. The airport authority is directed by what is described as an aggressive and progressive director. The mandate under which the aviation group operates is to provide facilities that are needed by the community (community meaning the airport users). The airport sees its role as staying ahead of trends, identifying community needs and meeting these needs (sometimes even before the users see the need themselves).

The airport itself does not operate any of the cargo facilities. The airport simply leases space and the users provide their own facilities. For example, importers and airlines have built their own facilities for handling perishable goods (eg. refrigeration facilities for cut flowers). If there were a need for additional facilities and the airport saw itself responsible for providing the facility, they would do so but contract out the management of the facility to a management group.

Automated cargo system. Miami Airport identified a need by the community and developed an automated cargo system for them. The system is intended to tie in the agents, carriers, and the federal agency groups at the airport; the information flow is automated. The system, patterned after the London-Heathrow system, tracks cargo moving through the airport. The cargo is tracked through the customs clearance process, inventory control process (this is done to help the airlines) and tracked until the shipment leaves the airport or the community. The system became on-line in March 1987 and it is hoped that all sectors (airlines, brokers and freight forwarders, and federal agencies) will be on-line by the end of the year.

Approximately a 1/3 of the cargo moved through Miami Airport are in-transit shipments and the remainder origin-destination in nature.[28] Once the automated cargo system is fully automated it is expected that the in-transit volume of shipments will increase.

Foreign trade zone. There is a foreign trade zone in Miami but it is not located on the airport nor is it under airport authority.

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[28] Approximately 1/3 of the cargo has customs documentation indicating that the shipment is in-transit in nature. Another 1/3 of the cargo moved through Miami Airport undergo formal customs procedures indicating that the goods are destined for Miami and last 1/3 undergo informal entry. For the goods that undergo informal entry it is difficult to determine if they are really destined for the Miami area. The goods that informally enter the country are items such as personal goods.

I. Bellingham International Airport

Bellingham International Airport is owned and operated by the Port of Bellingham which is a municipal entity in the state of Washington. Three elected commissioners make the decisions concerning this airport.

Marketing. This airport which serves a small community has been growing tremendously in the last few years. Bellingham Airport has been undergoing major expansion plans. Part of the Port Authority mandate is to create jobs in the Bellingham and Whatcom county area and the airport expansion has been part of their job creation plans.

There is no specific marketing group for aviation services but there is a marketing group that handles the needs of the entire Port of Bellingham. There is no active marketing of the airport because it is at capacity but the airport manager does to some degree assist in promoting the airport. The airport manager has been informally in contact with various airlines (eg. Time Air, Air BC) to keep them informed of the activities at Bellingham Airport. Prior to Bellingham Airport's expansion, the various airlines were not too interested in the airfield but with it's expansion, there has been a rise in interest.

The airport views itself in partnership with its users. However, because the airport is a public entity, they cannot favour any one group.

Strategic niche. Bellingham Airport is currently moving a lot of fresh fish to Southern California. The airport had identified a potential market for fresh fish, found interested groups in Southern California and interested shippers in the Bellingham area and then worked to develop the service. Fresh fish is currently a very trendy item in restaurants in Southern California. The novelty of being able to choose your meal directly from the fish tanks seems to have caught people's attention. The volume of fish currently being shipped from Bellingham exceeds the total volume of cargo shipped from Bellingham in 1984 and 1985.

Airport facilities. Currently the airport faces capacity problems but they are working toward alleviating this problem. The Port Commissioners recently voted to allow $1.6 million in improvements to the air terminal building. There are plans to extend the present runway.

Cargo. PSA flies in three times a day with 150 passenger MD-80 aircraft. Bellingham Airport is PSA's fourth largest cargo mover in their system. According to the airport manager, all aircraft holds are full arriving and departing from this airport. Once Bellingham Airport can increase its uplift capacity (ie. amount of cargo moved in and out of the airport), they plan to go after different airlines to provide/increase service to Bellingham. The airport can support DC-9's and MD-80's. The MD-80's can be containerized but PSA doesn't have this capability in their fleet yet.

Federal Express has been at the airport for one year.

The airport has customs brokers on the site.

Foreign trade zone. Just recently this airport opened their own foreign trade zone (FTZ). There are high hopes that it will be successful. At this time, there is already one operator utilizing Bellingham's FTZ. There is only one structure on the airport set aside for the FTZ but 150 acres of land has been set aside for it. The FTZ is 100% owned by the airport. The airport hopes to encourage other companies to develop their own foreign activities and build their own structures on the site.

Customs. U.S. Customs service is available at the airport on a 24 hour on-call basis.

__Computerization__. There is not a high level of computerization at Bellingham Airport. A few personal computers are in use in the administration offices.

Appendix 5.1

Synopsis of Studies Conducted to Date

This section provides short executive summaries of the following reports:

(1) The Future of Canadian Airport Management. (Smith Task Force, May 1986)

Hon. D. Mazankowski appointed Airports Task Force, November 1985, consisting of private sector representatives and Transport Canada officials.

(2) Edmonton Airports' Task Force Reports: Phase 1 and 2. (August 1985 / June 1987)

Studies were sponsored by a group of Edmonton businessmen who formed the Air Services Authority which became the Task Force Association.

(3) Task Force on Airport Management. (Hagglund, January 1980)

G.M. Hagglund was chairman of the Task Force on Airport Management.

(4) Freedom to Manage. (McNeil, January 1986)

Wayne NcNeil is a Vancouver based consultant.

(5) Vancouver International Airport Pacific Rim Marketing Program. (Transport Canada, 1987)

Transport Canada's proposed marketing program.

(6) V.I.A.: An Examination of Local Management Options, Volume 1. (Robson, April 23, 1987)

Marian Robson is a Vancouver based consultant.

(7) Freedom to Move: A Framework for Transportation Reform. (Hon. D. Mazankowski, July 1985)

Transportation Economic Regulatory Reform Package. Introduced by the then Minister of Transport, the Hon. Don Mazankowski.

The Future of Canadian Airport Management (Smith Task Force)

The Task Force directed itself to addressing the increasing costs of operating the airport system as a whole, and the stifling of local economic development because of bureaucratic centralization and government inefficiency.

The Task Force identified that there is a clear area of demarcation between safety, security, air navigation, and air traffic control, and the commercial operations of an airport. The former should remain the strict purview of Transport Canada and the latter should be closely scrutinized for a management structure that would render a greater return to the economy.

The report strongly recommended that changes be made: the status quo is not a viable option. The increasing direct and opportunity costs of the airport system is a source of spiraling losses to the Canadian taxpayer, especially given the fiscal success of many international airports and the spinoff activity that they are generating in their local economies.

The airport authority concept (autonomous local entities set up to own, operate, and finance an airport or several airports in a community) was the clear preference of the Task Force for those Canadian airports that could sustain themselves and had in place interested groups with the ability to manage those airports.

As a transition vehicle for airports that were not ready to become airport authorities or did not have groups that were ready and/or interested in that process and to catalyze the increased commercialization for all other airports, the Task Force recommended establishment of regional crown corporations.

The Task Force identified the Modified Transport Canada approach as the third best option of meeting its objectives.

Sale to the private sector as an option was eliminated because of public policy considerations of the airport as a tool of local economic development, official bilingualism, cross-subsidization of airports, and other aspects of a national airport system that the public demands.

The report recommended that federal legislation for approving the creation of authorities be enacted to ensure a common national framework and that the major policy considerations be reviewed by Parliament.

To respond in the near term to local groups interested in taking over the operation of their area airport(s), Transport Canada, through current legislation (the Canada Lands Grant Act) could lease (term dispositions) the airports. This would enable the local entities to achieve most of the objectives that could be realized with authorities, while providing insulation from critics to both the Federal Government and the local group: this could be portrayed as a test situation for both parties.

Prior to implementation, the Task Force considered it imperative that a comprehensive information base be developed entailing: airport by airport revenue forecasts and the establishment of a basis for effecting commercial transactions to authorities or a crown corporation.

Edmonton Airports' Task Force Report: Phase 1

In its 1981 report, the Federal Task Force on Airport Management (AKA the Hagglund report) identified the independent airport authority, a two tiered management system consisting of an appointed Board of Directors and professional management staff, to be the top ranked alternative for the organization and management of airports in Canada. This concept emphasizes increased local input into the operation and development of airport systems, which results in full local ownership and control over all aspects of airports, use of airports to promote regional economic growth, and an increased business orientation in the operations and management of airports. Consequently, the Edmonton Air Services Authority has established a special Airport Authority Task Force to investigate and make recommendations as to the application of this concept in the Edmonton area.

Key issues identified by the task force are the role of airports; management structure; integrity of the national airport system; transfer of assets; financing; and reaction of airport staff. Benefits associated with the airport authority concept would accrue to: (1) the Edmonton region in the way of greater control over the growth and development of the airport system and economic benefits; (2) airline and aviation industries in the form of more flexible and responsive management; (3) the City of Edmonton through the positive impact on the local economy; (4) the Province of Alberta by increased economic activity and decreased responsibility; (5) the Government of Canada in the way of decreased responsibilities and using the project as a pilot for other airports; (6) airport staff.

In an unanimous show of support for the concept, the Task Force recommends:

1) An agreement in principle by the three levels of government, federal provincial and local, to the formation of an independent airport authority to assume responsibility over the principle airports in the Edmonton region.
2) Establishment of an interim airport authority to oversee the establishment of a formal authority.
3) That the interim Board of Directors establish a plan for the implementation of the airport authority concept.
4) That the 3 levels of government provide the necessary staff and funding to implement the plan.

In Phase II of its feasibility study on the airport authority concept, the primary objective of the Regional Airports Task Force Association was to investigate this management alternative in relation to the Edmonton area after having considered legal, organizational, operational, and financial issues. The new authority would be established as a public corporation, with financial and legal independence, with two major components: an appointed Board of Directors and a professional staff. Its jurisdiction is expected to extend to Edmonton International and Municipal, Villeneuve, and Cooking Lake airports.

The analysis indicates that there should be no significant difficulties or changes from a labour relations perspective since comparable compensation, benefit, and security packages will be offered. There will be no reduction in staff. Using the Edmonton Municipal Airport as an example, the study concluded that relations with the airlines, aviation industry, municipalities, and regulatory agencies will be relatively unaffected.

A financial analysis determined that, while revenue would remain stable, direct operating costs for the system could be decreased by $2.5 million annually if the airport authority concept were implemented. (Combined revenues for all airports in 1985, excluding Cooking Lake, was $32.1 million and costs were $27.1 million). Long run financial analysis over a twenty year period indicates that the authority will be financially viable, have a strong balance sheet, and be able to attract the required capital financing. Acquisition costs in the base case example are expected to be in the order of $65 million. Initial financing is expected to be through the sale of long term revenue bonds.

Bearing in mind the findings of the Phase I study, the Task Force concluded that the formation of an independent airport authority would be feasible. It is recommended that the necessary steps be taken towards the formation of a regional airport authority to own and operate the major airports in the Edmonton area.

Task Force on Airport Management (Hagglund)

The Task Force on Airport Management (1980) examined the feasibility of implementing a new management structure for the principle Canadian airports that would promote greater local autonomy and increased responsiveness to regional needs without compromising system integrity. The delineation of a system with those components would ultimately result in an airport system characterized by a high degree of managerial accountability, financial viability, and efficiency. The structure that best accomplished that was thought to be the Airports Authority Model.

The existing public service operation of the major airports often results in a type of "organizational inertia" that makes it difficult to catalyze initiative, freedom, and quick responses that normally characterize a successful commercial enterprise.

The Task Force noted that as early as the 1960's, many western countries had embarked upon dramatic changes to the management and financial structures of their airport systems. Typically, the management responsibility for airport operations was removed from the public service, and various forms of commercial management were established. Usually, these were airport authorities. The greatest applicability for study was found in the American system since the two countries share common problems of size and diversity, and their culture and business ethics are similar.

The features of the U.S. system that foster the achievement of local autonomy and involvement are public openness, disclosure, and access. The management attitude towards the local community can be expressed in the philosophy that airport users are as much the airport customers as they are carrier customers. Aggressive authorities carry out their own research into potential carrier markets and then convince the carriers of the value of the market.

The commercial mandate of the authorities (including covenants on them through contractual arrangements), requires them to take a commercial approach to all aspects of airport operation and development. The exception is safety. The result of this commercial discipline has provided financial independence from municipal coffers: in some cases it has been as long as thirty years since inception.

The controls on capital development which the air carriers hold through user agreements not are normally restrictive. They should be considered as protection against irresponsible airport management rather than constraints; most authorities have never had carrier rejection of their capital development plans.

Because an airport is a monopoly, increases in non-aviation revenues, and not higher aviation revenues, are a better judge of an authority's marketing effectiveness. Through concerted effort to increase concession revenues, and to attract commercial and light industrial development, many authority airports have achieved dramatic shifts in their revenue base.

Close interaction with the users, and absence of financial recourse to the municipality, force the authorities to operate efficiently. This is confirmed by the fact that authority airports are the most efficiently and effectively managed airports in the U.S. system.

The authority concept promotes safety, by virtue of the fact that they have the ability to make decisions quickly and obtain financing easily. Thus, airport authorities can respond quickly to FAA directives. The close relationship between management and staff at airport authorities is also fostered by this ability to make quick decisions on all aspects personnel.

Authority airports, with their managerial flexibility, were found to adapt very well to deregulation and other trends in U.S. aviation.

Freedom to Manage (McNeil)

"Freedom to Manage" outlines a plan to develop the Vancouver International Airport into a major Canadian gateway to the Pacific. In turn, this will spur economic growth in the region and the Province. V.I.A.'s geographic location provides it with a strategic advantage in promoting both tourism and trade. Vancouver is an ideal site to handle overseas travellers, especially those in-transit, and shippers, who use the city as a intermodal transshipment centre to consolidate and/or break bulk shipments.

However, to realize economic growth, the concept of an airport authority with some form of local ownership should be implemented. This management change would result in improved efficiency and cost effectiveness that is difficult to attain under centralized government control. The airport in an authority concept would have the freedom to react to market developments and opportunities that require a swift response. Under central government management, bureaucratic channels spend far too long making decisions for airports to run efficiently and take advantage of short lived opportunities.

A shift to an airport authority role would also force each individual airport to be financially responsible and accountable for its operations. Projects undertaken at V.I.A. should be able to stand their own, and any profits should be retained and invested in the airport to allow further growth.

V.I.A. should immediately begin to take charge of its own direction in order to improve its ability to compete with the comprehensive marketing schemes of the U.S. West Coast airports.

Vancouver International Airport Pacific Rim Marketing Program (Transport Canada McCoomb)

Vancouver International Airport Pacific Rim Marketing Program analyses the marketing of the airport according to the four P's: Product, Price, Promotion, and Place. In the airport industry environment, it has been found that product and promotion are the essential elements to be thoroughly coordinated for Vancouver International Airport to actively compete in the market.

To be able to capture more of the passenger and cargo market share, V.I.A. must be developed into a product that offers facilities that will entice travellers and airlines. Improvements must be made in the cargo area and handling equipment, aircraft gate facilities, terminal space for administrative procedures, retail concession areas, and other amenities such as hotel complexes, business centres, golf courses, etc.

Promotion must be integrated into the development of V.I.A. to market its product offerings and to advertise its potential as the gateway to the Pacific Rim. Promotional pamphlets and booklets must be distributed worldwide and active participation in trade shows and exhibits are vital. Direct communications with airlines, major clients and customers, and local business groups should be constantly ongoing so as to be "in tune" with potential opportunities.

V.I.A. should seek out and develop its own innovative sources of funding/financial support outside the scope of the federal government. Airport investment opportunities should be promoted to the private sector with an eye to build joint private and public developments. A coordinated marketing approach between the airport, the federal and provincial governments, local groups such as the Vancouver Board of Trade, and the private sectors must be developed and implemented to meet the increased competitiveness of other airports (both along the U.S. West Coast and Toronto).

Summary of the plan

i) V.I.A. faces tough competition in attracting business, particularly from Los Angeles, San Francisco, Seattle, Portland, and New York.

ii) Domestically, V.I.A. faces the greatest challenge from Calgary International Airport since the merger of CP Air and PWA because they maintain headquarters and bases in both cities.

iii) Toronto challenges V.I.A. as the Canadian hub to the Pacific Rim.

iv) V.I.A. occupies a geographic focal point.

  - well located to accept Asian traffic destined for North America and Europe.

  - located closely to major sea port.

v) Free trade negotiations could ease the problems of transborder trade.

vi) V.I.A. experiences crowding during peak operations and plans are underway to expand and improve facilities.

vii) Bilateral agreements could hinder V.I.A.'s ability to handle Pacific Rim traffic.

viii) V.I.A. is not a separate cost/revenue centre and is financed by a system of revolving airport funds.

i) There is a large market for V.I.A. to attempt to gain in Pacific Rim traffic.

ii) V.I.A. has land available for expansion.

iii) V.I.A. can recapture some of the Canadian air cargo being lost to the U.S. gateways by improving handling facilities and promoting its closeness to the Port of Vancouver.

iv) V.I.A. able to expand using available and to develop the industrial/commercial activities of the airport.

i) Objectives
  a) increase passenger traffic
  b) increase air cargo traffic
  c) stimulate airport business development

ii) Place
  - Marketing must take advantage of the location of V.I.A. in terms of it being an attractive destination for travel and it being centrally located as an effective facility for cargo handling.

iii) Price
  - Not a critical factor because of:
    a) monopoly constraints
    b) international agreements
      - airport fees and charges are governed by international agreements
    c) magnitude
      - airport fees and charges constitute a very small share of the total cost of aviation services

iv) Product
  - Must consult with customers with the aim of enhancing the airport product.
    i) facilities development
      a) expansion of air cargo area and handling facilities
      b) North (International) Finger expansion project

- improvement of airport wing

c) air terminal building development in terms of office expansion project, retail concession area redevelopment and expansion, gate expansion

d) other amenities such as hotel complex, business centre, golf course, mini mall, etc

ii) developing innovative sources of funding/financial support

iii) advising and encouraging private sector airport investment opportunities and procedures

iv) coordinating joint private/public development initiatives to reach the goals of V.I.A.

v) Promotion

- Communicating investment and business opportunities available at the airport to existing and potential customers.

i) developing and distributing promotional materials

ii) advertising business opportunities

iii) participating in trade shows and exhibits

iv) maintaining communications with major clients and customers, international airlines, and tour industry to make them aware of opportunities for investment and business

v) participating in joint promotional activities

i) Coordination

- develop a two-tier structure

a)	upper tier -	powerful multi-agency marketing thrust (airport, port, tourist industry, etc.)
b)	lower tier -	airport specific marketing thrust

- proposed that upper tier coordinated by proposed Airport Economic Development Board
- lower tier coordinated by a dedicated V.I.A. marketing program team

Time table (in quarter-year increments)

i) Planning

- continued development of marketing strategy and refinement of goals

ii) Research

- continued research on Pacific Rim market

iii) Customer surveys

- identification of socio-economic profile needs

iv) Communication plan

- heightening awareness and support of plans

v) Promotional materials development

vi) Promotional activities

- identify and exploit opportunities for aggressive promotion of airport business opportunities

vii) Consultation

- negotiations with parties and partners to define goals and develop agreements on joint initiatives

viii) Product development plan

- identify potential marketing inputs for development process

ix) Product development activities

- identify potential marketing inputs for development process as customer needed are identified

x) Monitoring

- continual tracking of the marketing program performance

V.I.A.: An Examination of Local Management Options (Robson)

Marian Robson's paper provides a comparison between management roles at different North American settings and the situation at Vancouver International Airport. The main thrust of the analysis focusses on the United States' decision to put several of its transportation facilities under the control of port authorities.

Several organizational options for V.I.A. are defined and are categorized as follows: modified Transport Canada, federal crown corporation, federal airport commission, provincial crown corporation, regional/municipal body, and airport authority. Interviews were conducted to obtain comments concerning the current system of airport management and alternative management systems. The general view of the respondents is that the current airport situation cannot stimulate the growth potential that V.I.A. possesses.

The creation of a Vancouver Airport Authority through government agreements or legislation, with a mandate to effectively and efficiently operate and develop the assets of the V.I.A., is recommended. This will allow a local management structure to operate and develop V.I.A. on a commercially and financially self-sufficient basis. The Airport Authority would only be given jurisdiction on the ground side activities of the V.I.A. and other lower mainland airports. Any other responsibilities, such as national air navigation services, terminal control services, and safety regulation, would remain under the control of Transport Canada.

The potential benefits to be gained from an airport authority are numerous: coordination of marketing program with carriers, governments and ports, expansion and improvement of terminal facilities to attract new business and enhance present customers, development of airport lands for commercial purposes, and expansion of air cargo facilities.

Freedom to Move (Mazankowski)

The Federal Government's intention to deregulate the Canadian Airline industry was formally announced in the white paper "Freedom to Move" issued in July 1985. This followed the trend set by the United States' Airline Deregulation Act which was passed in 1977.

With respect to airports, however, "Freedom to Move" has little to say. The May 1985 Budget document stated that the Government would consider a new airport system management structure that would "provide for a self-sustaining system" and "allow for the independent operation of local airports". "Freedom to Move" followed this one month later stating: "The Department will make every effort, consistent with safety and security requirements, to reduce the administrative burden of its operations on carriers and to ensure that existing facilities are being efficiently used before new capital expenditures are made. Operations activities will be conducted in a more commercial manner and will encourage freer competition among carriers."

III. OPTIONS FOR MANAGEMENT STRUCTURE

The Future of Canadian Airport Management (Smith Task Force)

1. Airport Authorities - Autonomous local entities set up to own, operate, and finance an airport or several airports in a community.
2. Crown Corporation(s) - a lean holding company with autonomous wholly owned subsidiaries and each body with its own board of directors.
3. Modified Transport Canada - A streamlined, decentralized department operation.
4. Private Sector - Airports Owned and operated by a private sector enterprise.

Where no immediate local interests exists to establish authorities, airports are transferred to crown corporations. It is envisaged that a national holding company would be established, together with regionally based subsidiaries, each with its own board of directors.

Edmonton Airports' Task Force Report: Phase 1

The airport authority concept is comprised of two components: a Board of Directors and a professional staff organization. The Board of directors is appointed by the local municipalities and is responsible for establishing the overall goals, objectives, and policies for the airport system. The professional staff organization is responsible for organizing and managing the affairs of the authority and is generally headed by a General Manager or Executive Director. Often contract services for specialist expertise or for periods of peak activity are used since management structures tend to be quite lean.

Edmonton Airports' Task Force Report: Phase 2

A permanent, professional staff will be responsible for running the day-to-day operations of the organization while the authority for establishing overall goals, objectives, and policies of the airport system is to be invested in the Board of Directors. Composition, size, and length of appointment will be established from enabling legislation by the provincial government.

Under the airport authority concept, the authority will be run as a public corporation which is legally and financially independent from all levels of government. The local municipalities will not be control or be responsible for any aspect of the authority other than the appointment of the Board of Directors.

Task Force on Airport Management (Hagglund)

1. Federal Government Ownership.
2. Municipally Operated Airport.
3. Commission Management Structure.[3]
4. Airport Authority.[4]

V.I.A.: An Examination of Local Management Options (Robson)

- i) Modified Transport Canada
  - Transport Canada continues to manage airports under a national system, but with more flexibility from government procedures and practices, and greater commercial orientation
  - current or modified Transport Canada system cannot stimulate V.I.A. to realize its full potential
- ii) Federal Crown Corporation
  - Federal Government retains ultimate control, but a separate corporate entity with defined mandate, structure, and authority would be established
- iii) Federal Airport Commission
  - Federal Government retains ultimate control, but involves municipal input and a considerable degree of local autonomy.
  - some feel that the federal airport commission could be a good compromise solution.
- iv) Provincial Crown Corporation

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[3] It is operative at such airports as Vermont, Cear Rapids and Waterloo, Iowa. The commission structure is removed from city politics in that the management of the airport is the responsibility of a board of commissioners appointed by city council. It is usual for the city to approve salaries, capital budgets, etc., and process payment for airport expenditures and collect fees and charges. Accounts for the airport are often kept by both the airport and the city.

[4] It is a semi-independent, self-sustaining, and self-financing corporate entity created under state legislation. These authorities operate without tax dollars, are forced to apply prudent business management policies. They are characterized by a high degree of financial independence, normally paying for any service provided by local government.

- Transfer ownership and control from federal to provincial government, and establish some form of provincial crown corporation.

v) Regional/Municipal Body

- Transfer of management control to the Greater Vancouver Regional District or to a single municipality.

vi) Airport Authority

- Autonomous local entity set up to own (or lease), operate, and finance an airport or airports in a community.

Freedom to Move (Mazankowski)

May 1985 Budget document allowed for "the independent operation of local airports".

Freedom to Move states: "Operations activities will be conducted in a more commercial manner and will encourage freer competition among carriers."

Freedom to Manage (McNeil)

i) Status quo.
ii) Modified status quo- airport manager given operating freedom, but airport still controlled by government.
iii) Crown corporation.
iv) Airport commission or authority.
v) Private ownership.

Price Waterhouse Conference Proceedings

- Airport Authority
- Transport Canada Airport Authority Group to function as a commercial enterprise to the greatest extent possible.

IV. RECOMMENDED MODELS

The Future of Canadian Airport Management (Smith Task Force)

Creation of Airport Authorities where local groups with the support of their provincial and municipal government have requested local control of airport(s).

Edmonton Airports' Task Force Reports: Phase 1

Airport Authority. Examples are taken from the United States, Great Britain, and Europe where it has been successfully implemented.

As a second best option, crown corporations can be introduced in Canada. The status quo is unacceptable and a Modified Transport Canada option although a necessary devolution would likely suffer from many of the existing problems and constraints, and is clearly a third option.

Edmonton Airports' Task Force Report: Phase 2

Airport Authority

Recommendations have been made for fair regional representation; that the Board members have a strong commercial orientation; that they meet certain predetermined professional qualifications; that elected official and public servants be restricted from becoming a Director; that the Board be comprised of 7 - 12 individuals who would serve for a 5 - 7 year term; and that Transport Canada and the City of Edmonton be given representation on the Board.

Task Force on Airport Management (Hagglund)

Airport Authority.

V. I.A.: An Examination of Local Management Option (Robson)

Airport Authority

- Felt to be the most effective vehicle to achieve full potential of V.I.A.
- Allows for a high degree of commercial orientation, local control, increased flexibility

and responsiveness, improved efficiency, better access to capital and financial self-sufficiency.

Freedom to Manage (McNeil)

Airport authority recommended for long-term.

- allows for:
  - a) Better chance of implementing measures to improve efficiency and cost effectiveness.
  - b) Better development of marketing and opportunities.
  - c) Airport to be free from capital constraints of a centralized management of funds.
  - d) Increased ability to become involved with the local community.
  - e) Accountability will be responsibility of airport itself.

Price Waterhouse Conference Proceedings

Airport authority concept

- A legal and financially independent entity responsible for all airport property and operations.
- Has no taxing authority as it depends solely on revenues generated.
- To be operated on a "non-political" basis.
- Authority is to have a strong business orientation and be self-supportive.
- Board members to be appointed by local municipalities.
- Key provisions for the Board:
  1) Responsible for the policy and general administration of the affairs of the authority.
  2) Appointed for terms of 7 years (staggered).
  3) Has no financial interest in the airport or its. concessions.
  4) Members must have good standing and reputation in engineering, law, industry, or commerce and finance.
  5) Members can not be an officer or employee of the creating municipality.
  6) Non salaried expenses only.
  7) If there is one or more participating municipalities, one member of the board shall be appointed from person(s) nominated by executive officers of participating municipalities.
  8) If there are two or more participating municipalities, two members of the

board may be appointed from persons nominated by each executive officer of the participating municipalities.

9) Usual composition:

- Two licensed pilots
- One professional engineer
- One lawyer, licensed to practice in highest court of province
- One industry
- One finance
- One commerce

Appendix 6.1

U.S. Authority Airports

Wiley "Airport Administration and Management"

AIRPORT AUTHORITIES

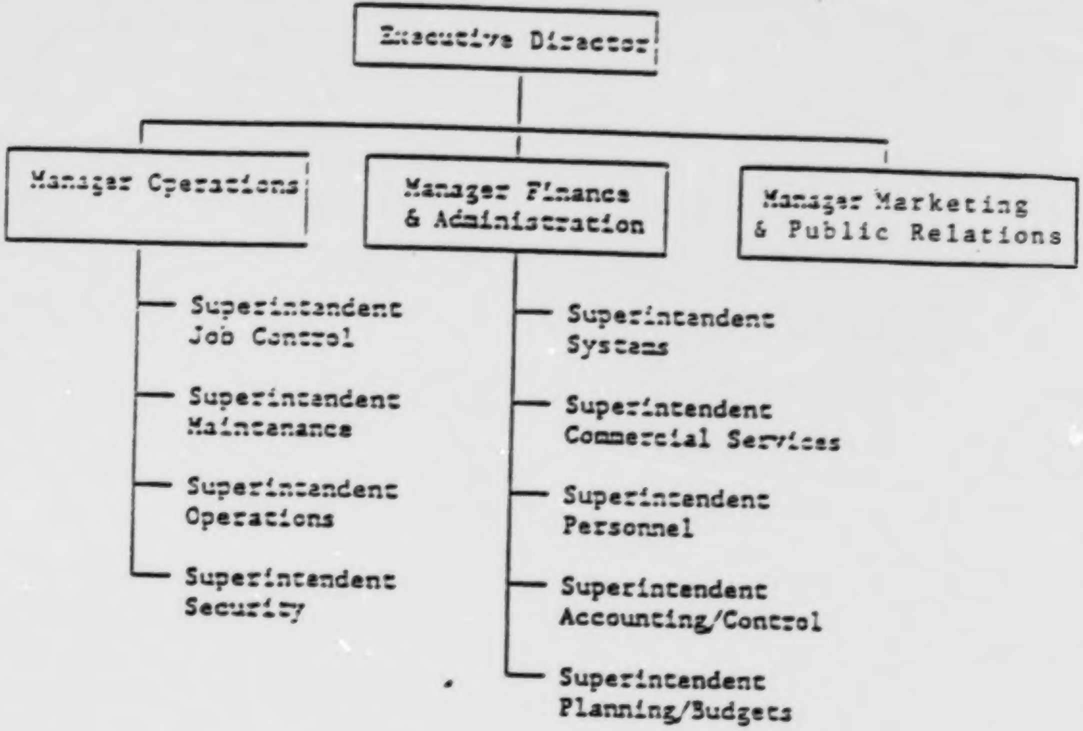
Akron-Canton
Allentown-Bethlehem-Easton
Cincinnati
Columbia
Evansville
Greensville
Huntingdon
Indianapolis
Jackson
Lake Charles
Lincoln
Louisville
Nashville
Minneapolis-St. Paul
Moline
Newport News
Omaha
Rockport
Santa Maria
Tampa
Tulsa

MULTI PURPOSE AIRPORT-PORT AUTHORITIES

Boston
Buffalo
Miami
New York
Oakland
Portland
San Diego
Seattle

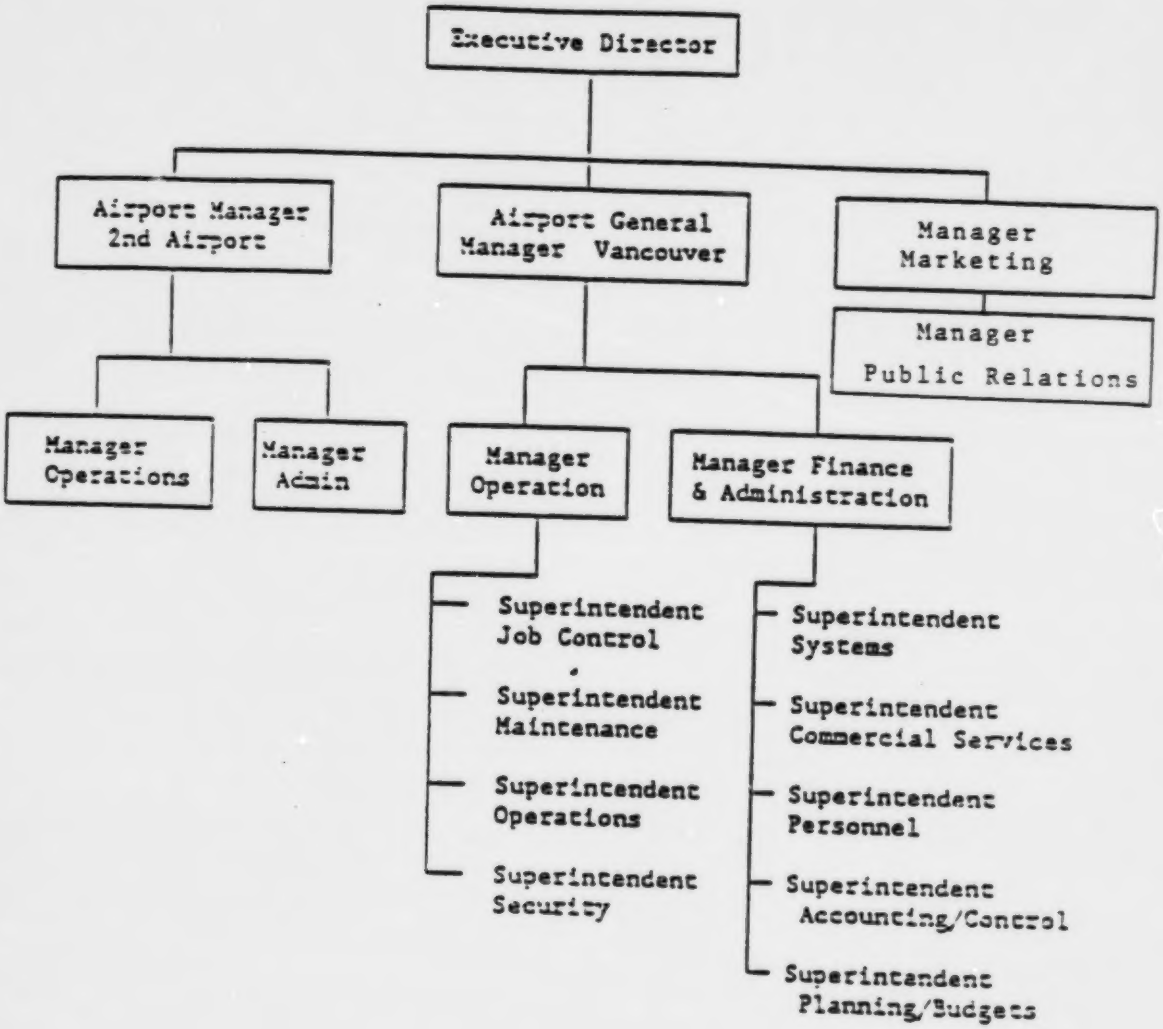
Appendix 6.2

- Conceptual Structure for a VIA Authority - Single Airport


Executive Director
Manager Operations
Manager Finance & Administration
Manager Marketing & Public Relations
Superintendent Job Control
Superintendent Maintenance
Superintendent Operations
Superintendent Security
Superintendent Systems
Superintendent Commercial Services
Superintendent Personnel
Superintendent Accounting/Control
Superintendent Planning/Budgets

Appendix 6.3

Conceptual Structure for a VIA Authority - Multiple Airports


Executive Director
Airport Manager 2nd Airport
Airport General Manager Vancouver
Manager Marketing
Manager Public Relations
Manager Operations
Manager Admin
Manager Operation
Manager Finance & Administration
Superintendent Job Control
Superintendent Maintenance
Superintendent Operations
Superintendent Security
Superintendent Systems
Superintendent Commercial Services
Superintendent Personnel
Superintendent Accounting/Control
Superintendent Planning/Budgets

Appendix 6.4

Executive Director

The Executive Director will be responsible directly to the Board of Directors. His responsibilities will include:

- the safe, secure, efficient and effective operations of the airport(s) and all its related systems, including airfield, aprons, parking facilities, hotel and ground access systems.
- efficient execution of all policy and contractual obligations.
- ensuring that the airport(s) meet performance targets as a business.
- public affairs and external relations.
- CEO to CEO marketing of property and services.
- strategic planning and long-term development.

Manager Marketing and Public Relations

The Manger, Marketing and Public Relations will be responsible for establishing an effective marketing program to promote the increased used of the airport and will deal with the media and the public on subjects related to the airport(s) such as tours and special events.

The officer will also ensure that airport VIP facilities are maintained, operated and scheduled to provide the highest possible image.

Manager Operations

The Manager Operations is responsible to the Executive Director for:

- Operations management including co-ordination of security with Transport Canada, operating of baggage systems, ground services, and 24 hour duty management.
- Airside operations including airfield operations and efficient gate utilization.
- Maintenance management
- Integration of operations and maintenance
- Continued delivery of effective service and systems at a high level of service.

- Chairing the Airport Operations Committee and the Airline Consultative Committee.
- Maintenance of up to day drawings and facility records.

Superintendent Job Control

The Superintendent Job Control is responsible to the Manager Operations for:

- Dealing with user complaints on Facilities and systems.
- Incoming work orders, work requests.
- Preparation of work orders from requests and from preventative maintenance schedules.
- Prioritization and issue of maintenance work orders.
- Procurement of material, management and stores.

Superintendent Maintenance

The Superintendent Maintenance is responsible to the Manager Operations for:

- Maintenance of the airport(s) and related facilities.
- Maintenance planning.
- Supervision of in-house maintenance staff and outside contractors.
- Timeliness and quality control for maintenance contracts.
- Minimizing utility costs.
- Preparation of preventative maintenance programs.
- Hiring and termination of maintenance personnel in accordance with Board policies.

Superintendent Operations

The Superintendent Operations is responsible to the Manager Operations for:

- Bridge/gate management and control.
- Smooth and efficient operation of the FIDS/BIDS and baggage systems.
- Airfield vehicle control.
- Snow removal and ice control planning and control.
- Ensuring 24 hour operations coverage.
- Chairing the Ground Transport Co-ordination Committee, the Construction/Operations Co-ordinating Committee and the Airport/ Civil Aviation Co-ordinating Committee.

Operations Officer

Operations Office provide 24 hour coverage and are responsible to the Superintendent Operations for:

- Representing the Executive Director, Operations Manager and Superintendent Maintenance in their absence.
- Airside operations including snow removal, apron control, aircraft handling, gate assignment and bridge management.
- Ensuring that emergencies are dealt with effectively and that the appropriate managers are notified.
- FIDS/BIDS and baggage handling systems effective use.
- Ensuring that the public information service is delivered effectively at a high level of service.
- Receiving, escorting and hosting distinguished visitors.
- Supervising the Operations Centre.
- Assuming direct line control of airport staff in after-hours emergencies.
- First-aid and medical services.
- Ground transportation and parking.
- Fire prevention.

Superintendent Security

The Superintendent Security is responsible to the Manager Operations for:

. identification and pass control

. policy and security planning

. co-ordination of air carrier, airport, and Transport Canada security

. chairing the Airport Security Committee

Manager of Finance and Administration

The Manager Finance and Administration is responsible to the Executive Director for all financial and administration aspects including:

. Accounting and reporting.
. Planning and budgeting.
. Cash Management.
. Personnel.
. Computer systems and software.
. Marketing.
. Legal issues.
. Insurance.
. Audits.

Superintendent Systems

The Superintendent Systems is responsible to the Manager Finance and Administration for:

. Computer systems development and planning.

. Systems documentation.

. Service and maintenance of computer systems including FIDS/BIDS.

. Management of computer systems and software development.

- Management information systems input/output.

Superintendent Commercial Services

The Superintendent Commercial Services is responsible to the Manager Finance and Administration for:

- Commercial/concession operations
- Lease negotiations.
- Marketing and research.
- Processing any facility change orders.
- Chairing the Airport Commercial/Marketing Committee.

Superintendent Personnel Administration

The Superintendent Personnel Administration is responsible to the Manager Finance and Administration for:

- Recruitment.
- Staff relations.
- Pay and benefits.
- Personnel information and policy.
- Employee safety programs.
- Training and development
- Maintenance of personnel records.

Superintendent Planning and Budgets

The Superintendent Planning and Budgets is responsible to the Manager Finance and Administration for:

- Budgeting.
- Long-term financial planning.
- Financing issues.

- Analysis of financial aspects of expansion and modification projects.

Superintendent Accounting and Control

The Superintendent Accounting and Control is responsible to the Manager Finance and Administration for:

- Financial and management accounting.
- Operation of financial data processing.
- Financial audit of all functions, concessions and carrier volume reports.
- Development of systems for revenue and cost control.
- Management audit as directed from time to time by the Terminal General Manager.

Appendix 6-5

U.S. bonds Issues for Airport Improvement, 1978-1982

(in millions of 1982 dollars)

	1978	1979	1980	1981	1982	1979-82
Large Airports	955.3	672.0	185.7	547.4	1,036.1	3,396.6
All Airports	1,279.6	921.2	618.1	819.1	1,408.8	5,046.8

Source: Congressional Budget Office "Financing U.S. Airports in the 1980's, April 1984.

Private investments or debt instruments for U.S. airports are very common. In fact, of the 24 largest U.S. airports, all have financed expansions through debt. In the early stages, U.S. airports were financed through federal government grants, as well as state and county funding. Since the beginning of the 1970's, the U.S. airports have matured as commercial enterprises in their own right with the majority of funds now coming from the sale of bonds. Between 1978 and 1982, airports raised a total of U.S. $5 billion (1982) in new debt issues to pay for capital projects.

U.S. airports issue two types of bonds:

- general obligation bonds. These bonds have the full backing of the state, municipality or other government. Obligations for bonds are secured by the taxing power of the backing government.

Appendix 6-5

- Revenue bonds. These bonds pledge user fees and lease revenues generated by the airport.

The larger the airport, the less likely it is to use general obligation financing. Governments feel that larger airports are gully capable of handling debt servicing of revenue bonds.

During the 1978-82 period, 134 airports issued new airport bond. Before sale, bonds are usually rated by two major investment rating companies. Moody's Investors Service Inc. and Standard and Poors Corporation. Every airport rated in the 1978-82 period received and "investment grade".

The rating letters for the two companies differ; Standard and Poor investment grade ratings are as follows:

- AAA: Best grade
- AA+ or AA: High grade
- A+, A or A-: Upper Medium Grade
- BBB+, BBB or BBB-: Medium Grade

All these are considered stable investments by Standard and Poors. For large airports, 100% of bonds issued in the period 1978-82 were rated Upper Medium Grade or better (Vancouver would be classified as large).

Standard and Poors were contacted to see if airport bond ratings had changed since 1982. Standard and Poors remains confident in airport bonds, and has rated most of the as "A" (Upper Medium Grade) in the past year. Airport bonds sell very well in the U.S. market place. Large institutional investors (insurance companies and pension funds) will buy bonds down to and "A" rating. With an "A" rating, institutions readily purchase airport bonds.

The deregulation of airlines in the U.S. has caused a shift in emphasis by rating organizations. In earlier years, rating organizations placed considerable emphasis on specific airline lease agreements. Since deregulation , and the lesser stability of airlines at an airport, bond raters have started placing emphasis on passenger demand rather than airlines. The belief is that sufficient passenger demand will sustain financial incentives for an airline to provide service over the long term.

One measure of an industry's strength is the number of defaults, or failures to meet debt obligations. In this aspect, airport financing is very strong. The airport industry has never suffered a single default. One analyst, in citing the premium quality of airports as credit risks, put it as follows:

"Airport revenue bonds have a remarkable track record. In spite of recessions, inflation, oil embargoes, fare wars, deregulation, astronomical increase in the price of aviation fuel, increasingly difficult community/airport relationships, costly noise mitigation programs, slot restrictions, a controllers' strike, curfews, threats about anti-rust exposure, and the like, the nation's airports have shown that they can meet the challenges, cope with change an consistently make payments on their outstanding debt. The industry has survived without a single default. The investment community has had its "seasoning" with airport revenue bonds. As a result of the positive experience there is a great deal of "comfort" in airport as credit risks today."

Appendix G.6

Components of Airport Agreements

Williams "Summary of Airport-Air Carrier Agreements

AIRPORT AGREEMENT

AGREEMENT COMPONENTS	1. JFK Unit Terminal	2. JFK Wing Building	3. Atlanta - 1960's	4. Atlanta - United	5. Atlanta - CPTC	6. Atlanta - New Terminal	7. Nashville	8. Detroit	9. New York - LaGuardia	10. Boston - Logan	11. FAA - TWA	12. FAA - 1975	13. FAA - 85166	14. FAA - 85182	15. FAA - Exhibit G	16. FAA - VIASA Airlines	17. Dallas-Fort Worth (DFW)	18. DFW - Delta	19. Dade County	20. Dade County (Miami)	21. Houston	22. El Paso International	23. Orlando	24. Baltimore	25. Cincinnati	26. Chicago - O'Hare (Lease)*	27. Chicago - O'Hare (Use Agreement)*	28. Newport News - Patrick Henry International*	TOTAL ALL AGREEMENTS
1. A. Lease	X	X			X	X	X	X	X	X	X	X		X						X		X				X			14
B. Use Agreement		X	X										X		X	X	X	X	X								X		9
C. Both Lease and Use Agreement				X																	X		X	X	X				5
2. Length of Agreement in Years	25	25	30	30	30	30	30	30	22	25	10	10	9	10		10	25	22	8	14	28	5	25	17	30	[illegible]	40		NA
3. Exclusive Use Areas	X	X		X	X		X		X	X	X	X		X			X	X			X	X	X	X	X	X			18
4. Common Areas		X	X				X	X					X				X			X	X	X	X			X	X	X	13
5. Preferential Use Areas				X	X				X	X			X								X			X					[illegible]
6. Severability				X	X		X			X							X				X	X	X	X	X	X	X	X	13
7. Quiet Enjoyment	X	X		X	X		X	X	X	X			X			X	X	X			X	X		X	X	X	X		16
8. Unrestricted Access	X	X	X			X	X										X		X		X				X	X			10
9. Provision for Future Construction	X	X		X	X	X				X							X	X				X			X				10
10. Equal Fees			X			X											X						X						4
11. Equal Privileges		X		X	X		X	X					X			X					X		X		X	X	X		13
12. Subordination	X		X	X	X	X	X	X										X					X	X					10
13. No Waiver of Default	X	X	X	X	X	X	X	X	X				X			X	X				X	X			X	X	X		17
14. A. Fees Based on Aircraft Landing Weight			X				X	X	X						X	X	X	X	X	X	X	X	X				X	X	15
B. Rent Based on Square Footage	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	28
C. Fees Based on Number of Enplaned Passengers		X					X	X					X			X	X				X		X					X	9
D. Fees Tied to Bond Financing			X				X	X									X	X		X							X		7
E. Minimum Fee			X				X										X	X							X	X	X		7
15. Carrier Review of Budget							X	X									X			X	X								[illegible]
16. Arbitration of Disputes							X	X					X									X							4
17. Prohibition on Use of Adjacent Airports																							X						1
18. Force Majeur Including Government Requirements	X	X		X	X	X				X							X	X			X	X							10
19. Forbids Denial of Civil Rights		X		X	X		X	X		X			X				X				X			X					[illegible]
20. Forbids Unreasonable Withholding of Consent				X	X		X	X			X	X				X	X	X			X					X	X		12
21. Writing Constitutes Entire Agreement	X	X				X	X										X				X			X					7
22. Assignment/Sublease Clause	X	X	X	X	X	X	X	X	X	X			X			X	X	X			X	X		X	X	X			[illegible]

Appendix. 6.7

Carrier Involvement in Budgeting (Williams)

LIMITS TO AIRPORT DISCRETION / AIRPORT AGREEMENT	1. JFK Unit Terminal	2. JFK Wing Building	3. Atlanta - 1960's	4. Atlanta - United	5. Atlanta - CPIC	6. Atlanta - New Terminal	7. Nashville	8. Detroit	9. New York - LaGuardia	10. Boston - Logan	11. FAA - TWA	12. FAA - 1975	13. FAA - 85166	14. FAA - 85182	15. FAA - Exhibit G	16. FAA - VIASA Airlines	17. Dallas-Fort Worth (DFW)	18. DFW - Delta	19. Dade County	20. Dade County (Miami)	21. Houston	22. El Paso International	23. Orlando	24. Baltimore	25. Cincinnati	26. Chicago - O'Hare (Lease)	27. Chicago - O'Hare (Use Agreement)	28. Newport News - Patrick Henry International	TOTAL ALL AGREEMENTS
1. Carrier May Review Items in Current Budget		X					X	X			X	X	X	X	X	X			X	X		X	X	X		X			15
2. Carrier May Review Items in Capital Budget		X		X	X			X	X														X			X			7
3. Majority-In-Interest May Review Items in Current Budget																	X	X			X				X				4
4. Majority-In-Interest May Review Items in Capital Budget																	X	X	X	X					X				5
5. Majority-In-Interest May Veto Items in Current Budget							X																X						2
6. Majority-In-Interest May Veto Items in Capital Budget			X		X		X	X									X	X					X						7
7. Carrier May Refuse to Pay for Capital Improvements					X					X																			2

Appendix 6-8

Normally the airport-airline agreements cover the following points:

The period of the contract, which is quite long if there are any carrier guarantees on revenues required for debt servicing.
Definition of what constitutes majority-in-interest of carriers for approval of airport capital development if this is a requirement included in the agreement. This definition varies from site to site, e.g. 60% of the carriers with 50% of the gross landed weight; 51% of the carriers with 75% of enplaned passengers.

Details on the facilities and areas that are included in the scope of the development.

Details on the functions which the carriers may carry out on the airport; transportation by air, servicing, aircraft parking, personnel training, sale of parts to others, use of public and common use areas, etc. The intent is to avoid carriers competing with the airport or its concessionaires.

Details on each carrier's exclusive use space, rental rates, and inflation adjustment provisions.

A definition of the liabilities of the parties.

A description of the causes and processes for termination of the agreement.

Covenants that the airport authority will:

. manage efficiently, with prudent control of operating expenses and with concession and tenant revenue comparable to other airports of similar size and purpose.

. use all revenues for airport purposes.

. keep all facilities in good repair and meet all federal safety standards.

. pledge the operating income of the airport as security for capital borrowings.

- make available to carriers an annual operating budget.
- hold a budget review meeting with the carriers if the operating budget exceeds the previous years expenses by a given percentage, with right of appeal to the Board and ultimately to binding arbitration.
- stay within budget unless otherwise agreed or in the event of an emergency that would close the airport.
- adjust fees as necessary throughout the year to ensure that revenues are adequate.
- tender all equipment purchases or contract over specified limits.
- seek majority-in-interest approval for all capital projects over specified limits, unless they are fully compensatory or required by goverment.
- present to the carriers sufficient detail on capital projects to permit informed decisions.
- permit carriers to review operating costs and revenues from time to time and to make suggestions on improvements or economies.
- consider the carriers as parties in interest in all studies, reviews, and plans for capital development.
- maintain accurate cost centre accounts.
- make available annual audited statements.
- diligently repair any damage to airport facilities.
- carry liability and damage insurance.
- supply utilities to the carriers at cost.
- not provide preferential rate to any carriers.

Covenants that the air carriers will:

- make up any shortfall between gross operating revenues and expenses (including operating losses, debt service and reserves) by an adjustment to landing fees.

- submit estimates of gross landed weight in advance for fee calculation.
- be bound for rentals for the entire period of the lease unless denied access.
- use gates on a preferential but not exclusive basis.
- not offer ground transportation.
- maintain preferential and exclusive use space to standards set by the authority.
- use only the authority airport(s) in the region.
- carry liability insurance.
- comply with the regulations of the authority.

Appendix 6-9

Description of Canadian Airports

TABLE 1: Involvement in Licenced Land Airports (1979)*

Organization	Number of Airports Owned	of Airports Operated	Passenger Traffic at Operated Airports as % of National Total	Number of Airports Subsidized	Passenger Traffic at Subsidized Airports as % of National Total
Transport Canada	138	90	89.0%	36	4%
Provincial Govts	415	52	0.4%	72	N/A
Municipal Groups					
- Governments		197	5.7%	-	-
- Commissions		21	0.1%	-	-
Other Organizations (DND, DIAND, Flying Clubs, etc.)		193	4.8%	-	-
TOTAL	553	553	100.0%		

Table 2: Airport Ownership by Airport Classification

Airport Class	Total Number of Licenced Land Airports	Number Federally Owned	Number Federally Operated
International	8	8	8
National	11	11	11
Regional	42	39	36
Local-Commercial and Local	492	80	35
	553	138	90

* FROM 'THE FEDERAL ROLE IN AIRPORTS, TRANSPORT CANADA 1981

Appendix 6.9

Operation of 138 Transport Canada Owned Land Airports

TC Operated	90
OP. By Others	48
	—
	138

Airport Commissions In Ontario

Gananoque
Kincardine
Huronia
Pembroke
Niagara (St. Catherines)
Toronto Island (Harbour Commission)
Waterloo-Wellington

Sudbury

T.C. owned, operated by city of Sudbury as a municipal airport. Recieves subsidy.

Hamilton

Same as Sudbury

TABLE C2

LAND AIRPORTS - BRITISH COLUMBIA

AIRPORT	CATA CLASSIFICATION	OWNER	OPERATOR	FEDERAL SUBSIDY	E/D PAX (000)1977	% OF O-D PAX THAT ARE INTERPROVINCIAL
LICENSED AIRPORTS						
VANCOUVER	INTERNATIONAL	TC	TC		3109.9	77
VICTORIA	NATIONAL	TC	TC		463.9	68
CAMPBELL RIVER	REGIONAL	TC	TC		59.1	23
CASTLEGAR	REGIONAL	TC	Municipality of Castlegar	YES	82.0	27
COMOX	REGIONAL	DND	DND		43.7	25
CRANBROOK	REGIONAL	TC	City of Cranbrook	YES	105.9	21
FORT NELSON	REGIONAL	TC	TC		35.9	37
FORT ST. JOHN	REGIONAL	TC	TC		174.2	37
KAMLOOPS	REGIONAL	TC	TC		189.5	37
KELOWNA	REGIONAL	TC	City of Kelowna	YES	265.1	37
PENTICTON	REGIONAL	TC	TC		89.0	41
PORT HARDY	REGIONAL	TC	TC		70.8	3
PRINCE GEORGE	REGIONAL	TC	TC		236.5	23
PRINCE RUPERT	REGIONAL	TC	TC		126.1	7
SANDSPIT	REGIONAL	TC	TC		38.7	6
TERRACE	REGIONAL	TC	TC		76.4	15
PITT MEADOWS	LOC.COM.SAT.	TC	TC			
ABBOTSFORD	LOCAL COMMERCIAL	TC	TC		7.7	
ATLIN	LOCAL COMMERCIAL		Atlin District Board of Trade			
BELLA COOLA	LOCAL COMMERCIAL		Mun.(Central Coast Regional District)			
BURNS LAKE	LOCAL COMMERCIAL		Mun.(Village of Burns Lake)			
CHETWYND	LOCAL COMMERCIAL		Mun.(Village of Chetwynd)			
CHILLIWACK	LOCAL COMMERCIAL		Mun.(Chilliwack Mun. Apt. B)			
CLEARWATER	LOCAL COMMERCIAL		Yellowhead Air Services			
DAWSON CREEK	LOCAL COMMERCIAL	TC	Mun.(Dawson Creek)	YES	32.2	39
EDDONTENAJON/ISKUT VILLAGE	LOCAL COMMERCIAL		Trans. Provincial Airways			
ELKO	LOCAL COMMERCIAL		Mun.(Regional District East Kootenay)			
FORT ST.JAMES	LOCAL COMMERCIAL		Mun.(Village of Fort St. James)			
GILLIES BAY	LOCAL COMMERCIAL		Texada Mines Ltd.			
GRAND FORKS	LOCAL COMMERCIAL		Mun.(Grand Forks)	YES	8.0	40
INVERMERE	LOCAL COMMERCIAL		Mun.(Invermere)			
LANGLEY	LOCAL COMMERCIAL		Mun.(Langley)			

*indicates ownership not clarified

TABLE C2

LAND AIRPORTS - BRITISH COLUMBIA

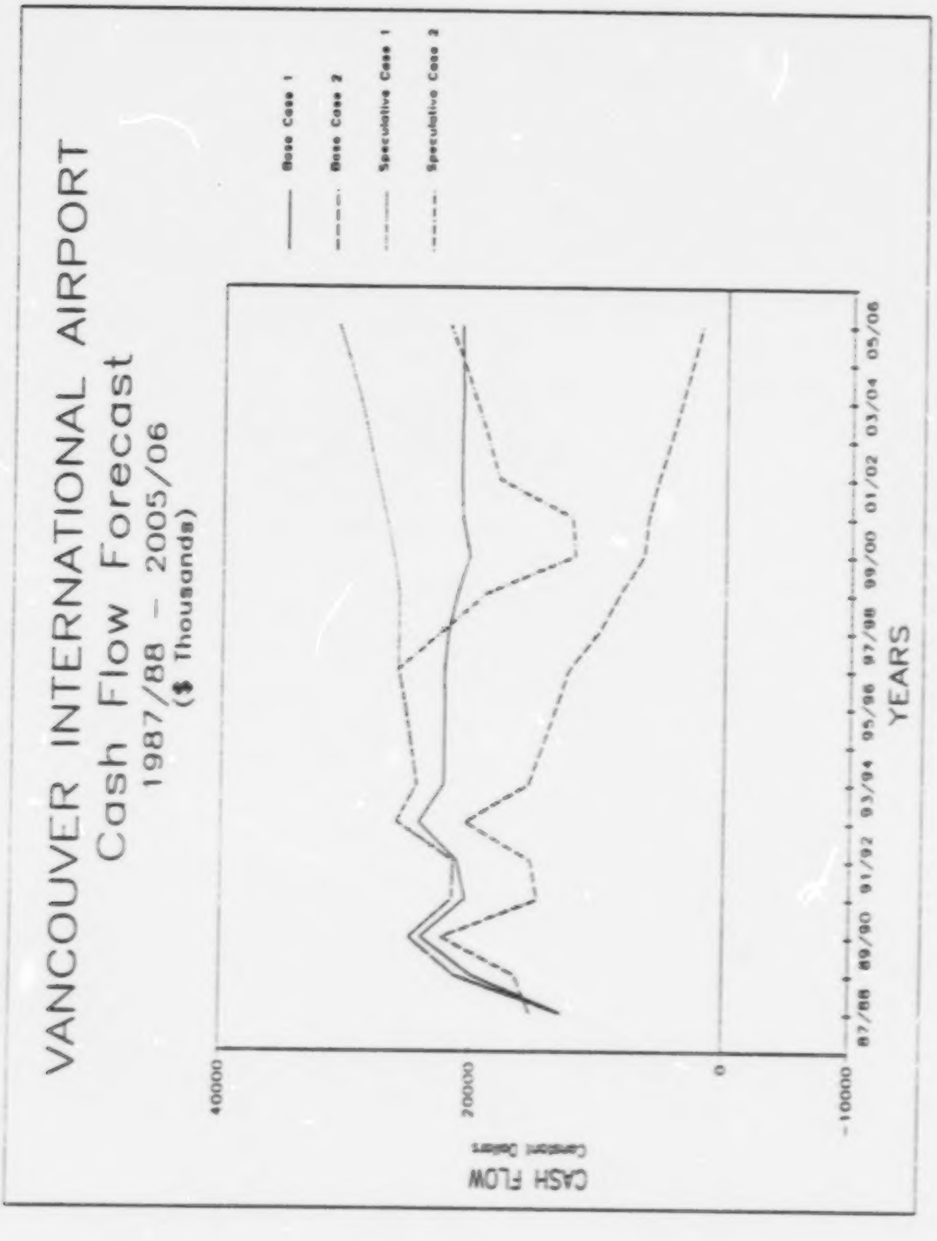
AIRPORT	CATA CLASSIFICATION	OWNER *	OPERATOR	FEDERAL SUBSIDY	E/D PAX (000) 1977	% OF E-D PAX THAT ARE INTERPROVINCIAL
MACKENZIE	LOCAL COMMERCIAL		Mun. (District of Mackenzie)			
NANAIMO/CASSIDY	LOCAL COMMERCIAL	TC	City of Nanaimo			
NELSON	LOCAL COMMERCIAL	TC	Mun. (City of Nelson)			
ONE HUNDRED EIGHT MILE RANCH	LOCAL COMMERCIAL		Block Brothers Ltd.			
PEMBERTON	LOCAL COMMERCIAL		Mun. (Pemberton)			
PORT ALBERNI	LOCAL COMMERCIAL		MacMillan Bloedel & Powell			
POWELL RIVER	LOCAL COMMERCIAL	TC	Mun. (District of Powell River)	YES	33.9	17
PRINCETON	LOCAL COMMERCIAL	TC	TC			
QUALICUM	LOCAL COMMERCIAL		Mun. (Qualicum)			
QUESNEL	LOCAL COMMERCIAL	TC	TC			
REVELSTOKE	LOCAL COMMERCIAL		Mun. (Revelstoke)		33.9	15
SMITHERS	LOCAL COMMERCIAL	TC	TC		43.9	12
SQUAMISH	LOCAL COMMERCIAL		Mun. (District of Squamish)			
STEWART	LOCAL COMMERCIAL		Mun. (Stewart)			
TOFINO	LOCAL COMMERCIAL	TC	TC			
TRAIL	LOCAL COMMERCIAL		Mun. (Trail)		2.9	
VALEMOUNT	LOCAL COMMERCIAL		Mun. (Valemount)			
VANDERHOOF	LOCAL COMMERCIAL	TC	Mun. (Village of Vanderhoof)			
VERNON	LOCAL COMMERCIAL		Mun. (Vernon)			
WILLIAMS LAKE	LOCAL COMMERCIAL	TC	TC		26.7	11
ALERT BAY	LOCAL		Mun. (Alert Bay)			
FORT ST. JOHN/CHARLIE LAKE	LOCAL		Tompkins Contracting Ltd.			
GIBSONS-SECHELT	LOCAL		Mun. (Village of Gibsons Sechelt)			
CLINTON	LOCAL		Mun. (Clinton)			
HOPE	LOCAL	TC	Vancouver Soaring Association			
KASLO	LOCAL		Mun. (Kaslo)			
McBRIDE	LOCAL		Mun. (McBride)			
MERRITT	LOCAL		Mun. (Merritt)			
NAKUSP	LOCAL		Mun. (Nakusp)			
OSOYOOS	LOCAL					
ONE HUNDRED MILE HOUSE	LOCAL	TC	Bridge Creek Estate Ltd.			
SALMO	LOCAL		Mun. (Village of Salmo)			
SALMON ARM						
[illegible] MOUNTAIN			Don Beattie Outfitting			

*Indicates ownership not clarified

TABLE C2

LAND AIRPORTS - BRITISH COLUMBIA

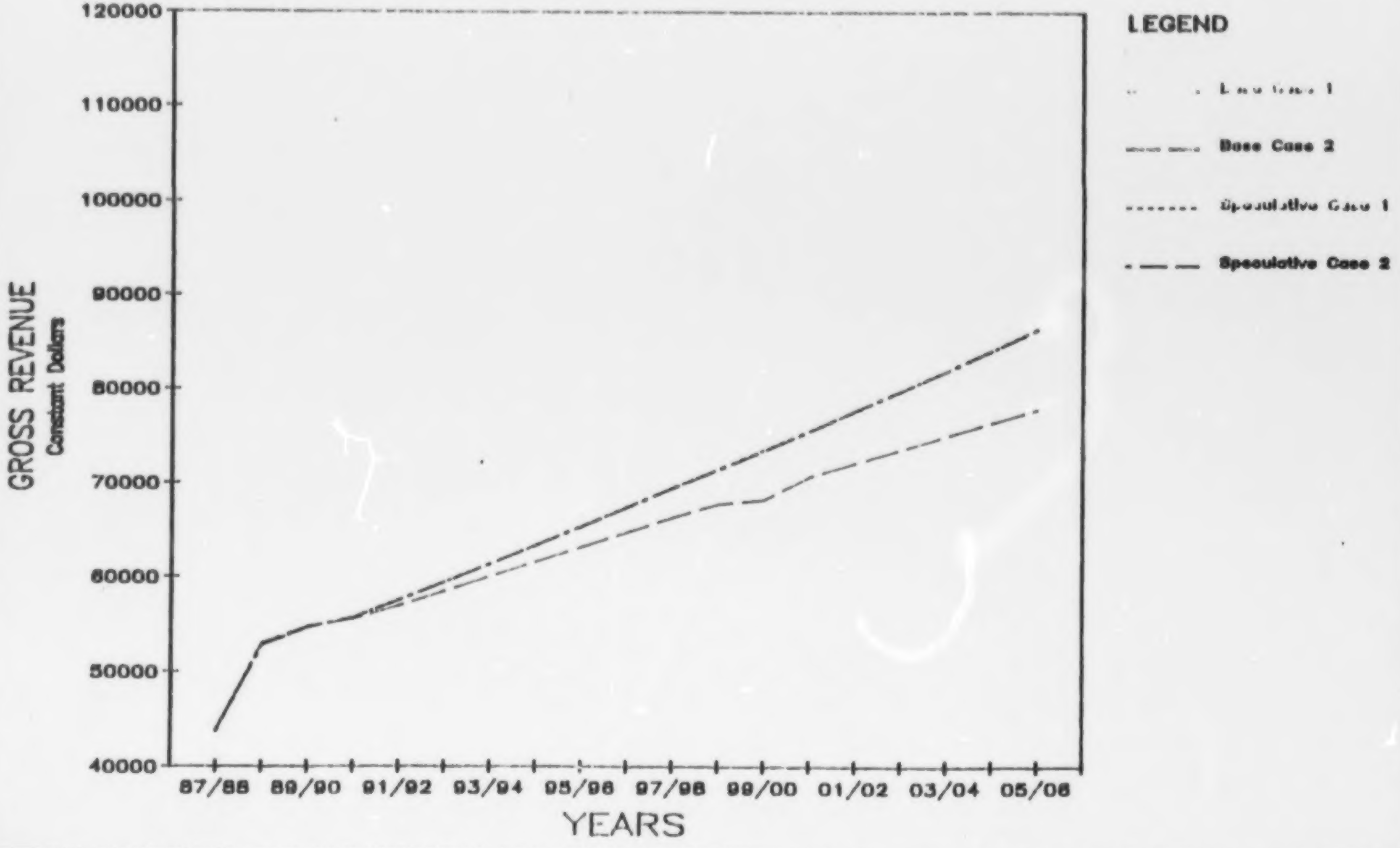
AIRPORT	CATA CLASSIFICATION	OWNER	OPERATOR	FEDERAL SUBSIDY	E/D PAX (000)1977	% OF E-D PAX THAT ARE INTERPROVINCIAL
UNLICENSED AERODROMES WITH UNIT TOLL TRAFFIC						
CLOWHOM FALLS					1.3	
DINAN BAY					1.5	
DUNCAN					6.1	
GILLIES BAY					1.8	
GOLD RIVER					3.1	
KENDRICKS ARM					0.7	
KINGCOME INLET					1.0	
LOUISE ISLAND					0.9	
MACKENZIE					1.9	
MESILINKA					1.3	
NAMU					1.8	
PHILLIP ARM					1.4	
PORT ELIZA					0.5	
PORT SIMPSON					15.0	
QUALICUM					2.9	
QUEEN CHARLOTTE					5.0	
RASPBERRY					0.7	
SEWELL INLET					2.1	
SILVER RIVER					0.9	
SIM CREEK					0.6	
STAVE LAKE					1.4	
STEWART					4.1	
TAHSIS					7.8	
TASU					3.3	
THOMPSON SOUND					0.9	
TLELLA					2.0	
TOBA					0.7	



VANCOUVER INTERNATIONAL AIRPORT
Cash Flow Forecast
1987/88 - 2005/06
($ Thousands)

Appendix 7-2

VANCOUVER INTERNATIONAL AIRPORT
Gross Revenue Forecast
1987/88 – 2005/06
($ Thousands)



Appendix 7-3

VANCOUVER INTERNATIONAL AIRPORT
NPV OF CASH FLOW
1987/8 - 2005/06
($ Thousands)
BASE CASE 1

			DISCOUNT RATES		
YEAR		CASHFLOW	0.03	0.05	0.08
1987/88	0	$12,720	$12,720	$12,720	$12,720
1988/89	1	19,950	19,369	19,000	18,472
1989/90	2	23,987	22,610	21,757	20,565
1990/91	3	20,492	18,753	17,702	16,267
1991/92	4	21,114	18,760	17,371	15,519
1992/93	5	24,222	20,894	18,979	16,485
1993/94	6	22,236	18,622	16,593	14,012
1994/95	7	22,231	18,076	15,799	12,972
1995/96	8	22,249	17,564	15,059	12,020
1996/97	9	22,294	17,086	14,371	11,153
1997/98	10	22,000	16,370	13,506	10,190
1998/99	11	21,304	15,390	12,456	9,137
1999/00	12	20,358	14,279	11,336	8,084
2000/01	13	20,960	14,273	11,116	7,707
2001/02	14	21,058	13,922	10,636	7,169
2002/03	15	21,023	13,494	10,112	6,627
2003/04	16	21,016	13,096	9,628	6,134
2004/05	17	21,033	12,725	9,177	5,685
2005/06	18	21,076	12,380	8,758	5,274
TOTAL		$401,323	$310,383	$266,073	$216,194

Appendix 7-4

VANCOUVER INTERNATIONAL AIRPORT
NPV OF CASH FLOW
1987/8 - 2005/06
($ Thousands)
BASE CASE 2

			DISCOUNT RATES		
YEAR		CASHFLOW	0.03	0.05	0.08
1987/88	0	$15,228	$15,228	$15,228	$15,228
1988/89	1	16,446	15,967	15,663	15,228
1989/90	2	22,353	21,070	20,275	19,164
1990/91	3	14,756	13,504	12,747	11,714
1991/92	4	15,285	13,581	12,575	11,235
1992/93	5	20,541	17,719	16,094	13,980
1993/94	6	15,503	12,984	11,569	9,770
1994/95	7	14,414	11,720	10,244	8,410
1995/96	8	13,372	10,556	9,051	7,224
1996/97	9	12,384	9,491	7,983	6,195
1997/98	10	10,000	7,441	6,139	4,632
1998/99	11	8,388	6,060	4,904	3,597
1999/00	12	6,482	4,546	3,609	2,574
2000/01	13	6,150	4,188	3,261	2,261
2001/02	14	5,338	3,529	2,696	1,817
2002/03	15	4,420	2,837	2,126	1,393
2003/04	16	3,553	2,214	1,628	1,037
2004/05	17	2,736	1,655	1,194	739
2005/06	18	1,969	1,157	818	493
TOTAL		$209,318	$175,446	$157,804	$136,693

Appendix 7-5

VANCOUVER INTERNATIONAL AIRPORT
NPV OF CASH FLOW
1987/8 - 2005/06
($ Thousands)
SPECULATIVE CASE 1

			DISCOUNT RATES		
YEAR		CASHFLOW	0.03	0.05	0.08
1987/88	0	$12,720	$12,720	$12,720	$12,720
1988/89	1	21,298	20,678	20,284	19,720
1989/90	2	24,987	23,553	22,664	21,422
1990/91	3	21,515	19,689	18,585	17,079
1991/92	4	21,451	19,059	17,648	15,767
1992/93	5	25,966	22,398	20,345	17,672
1993/94	6	24,412	20,445	18,217	15,384
1994/95	7	24,864	20,217	17,670	14,508
1995/96	8	25,374	20,030	17,174	13,709
1996/97	9	25,942	19,882	16,722	12,977
1997/98	10	25,930	19,294	15,919	12,011
1998/99	11	25,920	18,725	15,155	11,117
1999/00	12	26,439	18,544	14,722	10,499
2000/01	13	27,020	18,399	14,329	9,935
2001/02	14	27,662	18,288	13,971	9,418
2002/03	15	28,368	18,208	13,645	8,943
2003/04	16	29,139	18,158	13,349	8,505
2004/05	17	29,972	18,134	13,077	8,101
2005/06	18	30,871	18,133	12,828	7,725
TOTAL		$479,850	$364,556	$309,025	$247,213

Appendix 7-6

VANCOUVER INTERNATIONAL AIRPORT
NPV OF CASH FLOW
1987/8 - 2005/06
($ Thousands)
SPECULATIVE CASE 2

			DISCOUNT RATES		
YEAR		CASHFLOW	0.03	0.05	0.08
1987/88	0	$12,720	$12,720	$12,720	$12,720
1988/89	1	21,298	20,678	20,284	19,720
1989/90	2	24,987	23,553	22,664	21,422
1990/91	3	21,515	19,689	18,585	17,079
1991/92	4	21,451	19,059	17,648	15,767
1992/93	5	25,966	22,398	20,345	17,672
1993/94	6	24,412	20,445	18,217	15,384
1994/95	7	24,864	20,217	17,670	14,508
1995/96	8	25,374	20,030	17,174	13,709
1996/97	9	25,942	19,882	16,722	12,977
1997/98	10	25,000	18,602	15,348	11,580
1998/99	11	19,003	13,728	11,111	8,150
1999/00	12	12,001	8,417	6,683	4,766
2000/01	13	12,166	8,284	6,452	4,473
2001/02	14	18,016	11,911	9,099	6,134
2002/03	15	18,930	12,150	9,106	5,968
2003/04	16	19,909	12,407	9,121	5,811
2004/05	17	20,951	12,676	9,141	5,662
2005/06	18	22,058	12,957	9,166	5,520
TOTAL		$396,563	$309,804	$267,255	$219,023

Appendix 7-7

Transport Canada

Financial Projection System

Base Case 1
Base Case 2
Speculative Case 1
Speculative Case 2

AIRPORT NAME : VANCOUVER
AIRPORT CODE : P169 VERSION NUMBER : 011 DESCRIPTION : Base Case 1, Part 1
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER
STATEMENT OF REVENUES AND EXPENSES

HISTORICAL -----)				PROJECTED ----)									
1984	1985	1986		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			REVENUE (see attached schedules)										
22,909	25,692	34,982	Air Transportation Tax	-	-	-	-	-	-	-	-	-	-
10,577	11,225	13,205	Airfield Fees and Concessions	13,205	16,420	16,911	17,112	17,274	17,665	18,039	18,413	18,787	19,161
7,924	8,790	9,658	Passenger and Cargo, Fees and Rentals	9,658	11,542	11,880	12,026	12,215	12,499	12,780	13,061	13,342	13,623
8,117	9,716	9,299	Terminal Concessions	9,299	11,969	12,449	12,647	13,150	13,567	14,071	14,575	15,079	15,583
6,758	7,370	8,442	Groundside Concessions	8,442	9,557	9,903	10,075	10,488	10,838	11,150	11,462	11,776	12,088
3,030	2,951	3,215	Industrial Rentals, Leases and Concessions	3,215	3,560	3,666	3,719	3,847	3,955	4,054	4,153	4,252	4,351
19	-	-	Fees and Rental,Other Government Departments	-	-	-	-	-	-	-	-	-	-
59,334	65,744	78,801		43,819	53,048	54,809	55,579	56,974	58,524	60,094	61,664	63,236	64,806
			OPERATING EXPENSES (see attached schedule)										
6,181	6,667	7,592	Salaries, Wages and Benefits	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716
2,743	1,402	1,662	Materials and Supplies	1,662	1,882	1,950	1,984	2,065	2,134	2,196	2,258	2,320	2,382
5,968	8,492	8,799	Purchased Services	8,799	9,961	10,321	10,501	10,932	11,297	11,623	11,950	12,277	12,604
16	50	130	Other Direct Operating Costs	130	147	152	155	161	166	171	176	181	186
5,421	5,507	5,900	Depreciation	6,542	7,026	8,011	8,452	8,683	9,408	9,859	10,617	11,427	11,887
-	-	-	Other Expenses	2,500	2,830	2,932	2,983	3,105	3,209	3,302	3,395	3,488	3,581
-	-	-	Bad Debt Expense	-	-	-	-	-	-	-	-	-	-
20,329	22,118	24,083		26,349	28,562	30,082	30,791	31,662	32,930	33,867	35,112	36,409	37,356
39,005	43,626	54,718	CONTRIBUTION FROM OPERATIONS	17,470	24,486	24,727	24,788	25,312	25,594	26,227	26,552	26,827	27,450
			ALLOCATED COSTS										
4,106	4,673	5,004	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
8,004	7,348	7,620	Terminal Control Costs	-	-	-	-	-	-	-	-	-	-
4,868	2,214	7,255	Grants in Lieu of Taxes	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
17,058	14,235	19,959		7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
(7)	(125)	-	Gain (Loss) on Sale of Land	-	-	-	-	-	-	-	-	-	-
-	-	-	Net Interest Expense (Income)	425	1,080	1,726	2,364	2,667	3,059	3,668	4,252	4,811	5,346
21,940	29,266	34,759	PROFIT (LOSS) BEFORE INCOME TAXES	9,790	16,151	15,746	15,169	15,390	15,280	15,304	15,045	14,761	14,849
			PROVISION FOR INCOME TAXES										
-	-	-	Current Taxes	-	-	-	-	-	-	-	-	-	-
-	-	-	Deferred Taxes	-	-	-	-	-	-	-	-	-	-
21,940	29,266	34,759	PROFIT BEFORE EXTRAORDINARY ITEMS	9,790	16,151	15,746	15,169	15,390	15,280	15,304	15,045	14,761	14,849
-	-	-	Extraordinary Item - Loss Carryforward	-	-	-	-	-	-	-	-	-	-
21,940	29,266	34,759	NET PROFIT (LOSS)	9,790	16,151	15,746	15,169	15,390	15,280	15,304	15,045	14,761	14,849
90,457	112,397	141,663	OPENING RETAINED EARNINGS	176,422	186,212	202,363	218,109	233,278	248,668	263,948	279,252	294,297	309,058

29 Oct, 1987

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169   VERSION NUMBER : 011   DESCRIPTION :
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

BASE CASE 1, PART 1

TRANSPORT CANADA

VANCOUVER
STATEMENT OF CASH FLOW

HISTORICAL -----)				PROJECTED -----)									
1984	1985	1986		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			SOURCES OF CASH										
55,393	66,480	78,214	Collection of Accounts Receivable	48,763	51,618	54,536	55,459	56,758	58,284	59,850	61,421	62,992	64,563
-	127	5	Decrease in Inventory	-	-	-	-	-	-	-	-	-	-
-	1	335	Proceeds on Sale of Fixed Assets	-	-	-	-	-	-	-	-	-	-
-	-	-	Proceeds on Sale of Investments	-	-	-	-	-	-	-	-	-	-
174	89	66	Increase in Employee Termination Benefits	131	329	322	316	310	304	299	293	287	282
-	-	-	Additions to Long Term Debt	17,536	10,093	18,191	10,775	5,292	15,000	15,000	15,000	15,000	15,000
-	-	-	Additions to Share Capital	-	-	-	-	-	-	-	-	-	-
4,273	1,812	(185)	Additions to Contributed Surplus	-	-	-	-	-	-	-	-	-	-
59,840	68,509	78,435	TOTAL SOURCES	66,430	62,040	73,049	66,550	62,360	73,588	75,149	76,714	78,279	79,845
			USES OF CASH										
6,181	6,667	7,592	Salaries, Wages and Benefits	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716
27,647	29,465	36,248	Payments of Accounts Payable and Holdbacks	46,041	33,322	39,075	35,082	29,779	37,011	39,450	39,936	40,424	40,910
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Interest Expense (Income)	425	1,080	1,726	2,364	2,667	3,059	3,668	4,252	4,811	5,346
55	-	-	Increase in Inventory	1	49	16	7	19	15	14	14	14	14
-	-	-	Purchase of Investments	-	-	-	-	-	-	-	-	-	-
-	-	-	Income Taxes Paid	-	-	-	-	-	-	-	-	-	-
-	-	-	Decrease in Employee Termination Benefits	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Debt Payments	587	923	1,529	1,889	2,065	2,565	3,065	3,565	4,065	4,565
-	-	-	Redemptions of Share Capital	-	-	-	-	-	-	-	-	-	-
-	-	-	Reductions of Contributed Surplus	-	-	-	-	-	-	-	-	-	-
38,069	40,805	48,924	TOTAL USES	53,770	42,090	49,062	46,058	41,246	49,366	52,913	54,483	56,030	57,551
21,771	27,704	29,511	INCREASE (DECREASE) CASH	12,720	19,950	23,987	20,492	21,114	24,222	22,236	22,231	22,249	22,294
74,910	96,681	124,385	OPENING CASH	153,896	166,616	186,566	210,553	231,045	252,159	276,381	298,617	320,848	343,097
-	-	-	IMPUTED BANK INTEREST INCOME (EXPENSE)	-	-	-	-	-	-	-	-	-	-
96,681	124,385	153,896	CLOSING CASH	166,616	186,566	210,553	231,045	252,159	276,381	298,617	320,848	343,097	365,391

29 Oct, 1987

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169 VERSION NUMBER : 011 DESCRIPTION :
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

Case Case 1, Part 1

TRANSPORT CANADA

VANCOUVER
FINANCIAL RATIOS AND OPERATING STATISTICS

	HISTORICAL -----)			PROJECTED -----)									
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
FINANCIAL RATIOS													
Net Profit Margin	.37	.45	.44	.22	.30	.29	.27	.27	.26	.25	.24	.23	.23
Operating Contribution Margin	.66	.66	.69	.40	.46	.45	.45	.44	.44	.44	.43	.42	.42
Return on Capital	.20	.26	.30	.07	.12	.11	.10	.11	.10	.10	.09	.09	.09
Return on Share Equity	.21	.27	.30	.09	.15	.16	.16	.17	.19	.21	.23	.25	.27
Current Ratio	1.22	1.43	.77	.85	1.08	.89	1.02	1.10	.88	.86	.84	.82	1.26
Debt/Equity Ratio	-	-	-	.14	.23	.41	.52	.59	.80	1.03	1.31	1.65	2.10
Asset Turnover Ratio	.50	.55	.59	.31	.37	.35	.35	.37	.36	.36	.36	.36	.36
OPERATING STATISTICS AND RATIOS													
Passenger Traffic													
- Domestic	4,353,200	4,618,200	4,895,000	4,776,670	4,839,000	4,995,000	5,089,000	5,303,000	5,489,000	5,603,000	5,717,000	5,832,000	5,946,000
- International	2,017,200	2,078,400	2,117,000	2,241,407	3,106,000	3,237,000	3,286,000	3,415,000	3,520,000	3,666,000	3,812,000	3,958,000	4,104,000
Aircraft Movements													
- Carrier	-	-	110,152	128,316	166,500	172,300	174,700	175,500	180,000	183,440	186,880	190,320	193,760
- General Aviation	-	-	-	125,354	147,500	150,000	151,000	155,000	158,000	161,400	164,800	168,200	171,600
- Other	222,645	210,600	125,448	-	-	-	-	-	-	-	-	-	-
Operating Cost/Passenger	3.19	3.30	3.43	3.75	3.59	3.65	3.68	3.63	3.66	3.65	3.68	3.72	3.72
Passenger/Person Years	37,037.21	35,431.75	35,958.97	-	-	-	-	-	-	-	-	-	-
Revenue/Passenger	8.84	9.38	10.78	5.79	6.23	6.21	6.19	6.09	6.06	6.05	6.04	6.02	6.02
Passenger & Cargo Fees/Passenger	1.24	1.31	1.38	1.38	1.45	1.44	1.44	1.40	1.39	1.38	1.37	1.36	1.36
Terminal Concessions/Passenger	1.27	1.45	1.33	1.33	1.51	1.51	1.51	1.51	1.51	1.52	1.53	1.54	1.55
Groundside Concessions/Passenger	1.06	1.10	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
HQ & Regional Overhead/Passenger	.66	.70	.73	-	-	-	-	-	-	-	-	-	-
Terminal Operating Costs/Passenger	1.26	1.10	1.09	-	-	-	-	-	-	-	-	-	-
Airside Costs/Total Plane Movements	72.07	70.64	70.50	25.44	21.57	21.32	21.25	21.30	21.12	20.96	20.81	20.66	20.52
Plane Movement/Person Year	1,294.45	1,156.61	1,208.21	-	-	-	-	-	-	-	-	-	-
Total Plane Movements	222,645	210,600	235,600	253,670	314,000	322,300	325,700	330,500	338,000	344,840	351,680	358,520	365,360
Total Person Years	172	189	195	-	-	-	-	-	-	-	-	-	-

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : F169 VERSION NUMBER : 021 DESCRIPTION :
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

Base Case 1, Part 2

TRANSPORT CANADA

VANCOUVER
STATEMENT OF REVENUES AND EXPENSES

HISTORICAL -----> 1984	1985	1986		PROJECTED -----> 1988	1989	1990	1991	1992	1993	1994	1995	1996
			REVENUE (see attached schedules)									
22,909	25,692	34,982	Air Transportation Tax	-	-	-	-	-	-	-	-	-
10,577	11,225	13,205	Airfield Fees and Concessions	19,535	19,745	19,955	20,165	20,375	20,585	20,795	21,005	21,215
7,924	8,790	9,650	Passenger and Cargo, Fees and Rentals	13,904	14,117	14,278	14,542	14,754	14,966	15,179	15,391	15,604
8,117	9,716	9,299	Terminal Concessions	16,087	16,612	16,850	17,663	18,188	18,713	19,238	19,763	20,288
6,750	7,370	8,442	Groundside Concessions	12,400	12,775	12,501	13,526	13,901	14,276	14,651	15,026	15,401
3,030	2,951	3,215	Industrial Rentals, Leases and Concessions	4,450	4,567	4,670	4,800	4,917	5,034	5,151	5,268	5,385
19	-	-	Fees and Rental,Other Government Departments	-	-	-	-	-	-	-	-	-
59,334	65,744	78,801		66,376	67,816	68,264	70,696	72,135	73,574	75,014	76,453	77,893
			OPERATING EXPENSES (see attached schedule)									
6,101	6,667	7,592	Salaries, Wages and Benefits	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716
2,743	1,402	1,662	Materials and Supplies	2,444	2,518	2,592	2,666	2,740	2,814	2,888	2,962	3,036
3,968	8,492	8,799	Purchased Services	12,930	13,322	13,714	14,105	14,496	14,887	15,279	15,670	16,062
16	58	130	Other Direct Operating Costs	191	197	203	209	215	221	227	233	239
5,421	5,507	5,900	Depreciation	9,031	9,841	10,651	11,461	12,186	12,637	13,395	14,205	14,665
-	-	-	Other Expenses	3,674	3,785	3,896	4,007	4,118	4,229	4,340	4,451	4,562
-	-	-	Bad Debt Expense	-	-	-	-	-	-	-	-	-
20,329	22,118	24,083		34,986	36,379	37,772	39,164	40,471	41,504	42,845	44,237	45,280
39,005	43,626	54,718	CONTRIBUTION FROM OPERATIONS	31,390	31,437	30,492	31,532	31,664	32,070	32,169	32,216	32,613
			ALLOCATED COSTS									
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-
8,004	7,348	7,620	Terminal Control Costs	-	-	-	-	-	-	-	-	-
4,868	2,214	7,255	Grants in Lieu of Taxes	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
17,058	14,235	19,959		7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
(7)	(125)	-	Gain (Loss) on Sale of Land	-	-	-	-	-	-	-	-	-
-	-	-	Net Interest Expense (Income)	6,867	7,352	7,811	8,245	8,654	9,039	9,398	9,732	10,041
21,940	29,266	34,759	PROFIT (LOSS) BEFORE INCOME TAXES	17,268	16,830	15,426	16,032	15,755	15,776	15,516	15,229	15,317
			PROVISION FOR INCOME TAXES									
-	-	-	Current Taxes	-	-	-	-	-	-	-	-	-
-	-	-	Deferred Taxes	-	-	-	-	-	-	-	-	-
21,940	29,266	34,759	PROFIT BEFORE EXTRAORDINARY ITEMS	17,268	16,830	15,426	16,032	15,755	15,776	15,516	15,229	15,317
-	-	-	Extraordinary Item - Loss Carryforward	-	-	-	-	-	-	-	-	-
21,[illegible]	29,[illegible]	34,[illegible]	NET [illegible] (LOSS)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]5	[illegible]76	[illegible]516	[illegible],229	[illegible]5,31[illegible]

0 Oct, 1987

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169 VERSION NUMBER : 021 DESCRIPTION :
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

BASE CASE 1, PART 2

TRANSPORT CANADA

VANCOUVER
STATEMENT OF CASH FLOW

HISTORICAL -----)				PROJECTED -----)								
1984	1985	1986		1988	1989	1990	1991	1992	1993	1994	1995	1996
			SOURCES OF CASH									
55,393	66,480	78,214	Collection of Accounts Receivable	66,133	67,593	68,194	70,319	71,912	73,351	74,791	76,230	77,670
-	127	5	Decrease in Inventory	-	-	-	-	-	-	-	-	-
-	1	335	Proceeds on Sale of Fixed Assets	-	-	-	-	-	-	-	-	-
-	-	-	Proceeds on Sale of Investments	-	-	-	-	-	-	-	-	-
174	89	66	Increase in Employee Termination Benefits	329	322	316	310	304	299	293	287	282
-	-	-	Additions to Long Term Debt	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
-	-	-	Additions to Share Capital	-	-	-	-	-	-	-	-	-
4,273	1,812	(185)	Additions to Contributed Surplus	-	-	-	-	-	-	-	-	-
59,840	68,509	78,435	TOTAL SOURCES	81,462	82,915	83,510	85,629	87,216	88,650	90,084	91,517	92,952
			USES OF CASH									
6,181	6,667	7,592	Salaries, Wages and Benefits	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716
27,647	29,465	36,248	Payments of Accounts Payable and Holdbacks	47,980	41,961	42,543	43,126	43,707	44,290	44,872	45,455	46,037
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-
-	-	-	Long term Interest Expense (Income)	6,667	7,352	7,811	8,245	8,654	9,039	9,398	9,732	10,041
55	-	-	Increase in Inventory	14	17	17	17	16	17	17	16	17
-	-	-	Purchase of Investments	-	-	-	-	-	-	-	-	-
-	-	-	Income Taxes Paid	-	-	-	-	-	-	-	-	-
-	-	-	Decrease in Employee Termination Benefits	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Debt Payments	5,065	5,565	6,065	6,565	7,065	7,565	8,065	8,565	9,065
-	-	-	Redemptions of Share Capital	-	-	-	-	-	-	-	-	-
-	-	-	Reductions of Contributed Surplus	-	-	-	-	-	-	-	-	-
38,069	40,805	48,924	TOTAL USES	66,442	61,611	63,152	64,669	66,158	67,627	69,068	70,484	71,876
21,771	27,704	29,511	INCREASE (DECREASE) CASH	22,000 15,020	21,304	20,358	20,960	21,058	[illegible]	21,016	21,033	21,076
74,910	96,681	124,385	OPENING CASH	267,691	282,711	304,015	324,373	345,333	366,391	387,414	408,430	429,463
-	-	-	IMPUTED BANK INTEREST INCOME (EXPENSE)	-	-	-	-	-	-	-	-	-
96,681	124,385	153,896	CLOSING CASH	282,711	304,015	324,373	345,333	366,391	387,414	408,430	429,463	450,539

Base Case I, Part 2

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169 VERSION NUMBER : 021 DESCRIPTION :
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER
FINANCIAL RATIOS AND OPERATING STATISTICS

	HISTORICAL ----)			PROJECTED -----)								
	1984	1985	1986	1988	1989	1990	1991	1992	1993	1994	1995	1996
FINANCIAL RATIOS												
Net Profit Margin	.37	.45	.44	.26	.25	.23	.23	.22	.21	.21	.20	.20
Operating Contribution Margin	.66	.66	.69	.47	.46	.45	.45	.44	.44	.43	.42	.42
Return on Capital	.20	.26	.30	.10	.10	.09	.09	.09	.09	.08	.08	.08
Return on Share Equity	.21	.27	.30	.71	.84	1.03	1.59	3.28	(35.21)	(2.61)	(1.30)	(.87)
Current Ratio	1.22	1.43	.77	.79	.77	.75	.74	.73	.72	.70	.69	1.35
Debt/Equity Ratio	-	-	-	5.60	7.30	10.25	16.04	35.32	(393.01)	(30.74)	(16.07)	(11.64)
Asset Turnover Ratio	.50	.55	.59	.37	.37	.36	.36	.37	.37	.37	.37	.38
OPERATING STATISTICS AND RATIOS												
Passenger Traffic												
- Domestic	4,353,200	4,618,206	4,895,000	6,060,000	6,228,000	5,856,000	6,564,000	6,732,000	6,900,000	7,068,000	7,236,000	7,404,000
- International	2,017,200	2,078,400	2,117,000	4,250,000	4,394,000	4,538,000	4,682,000	4,826,000	4,970,000	5,114,000	5,258,000	5,402,000
Aircraft Movements												
- Carrier	-	-	110,152	197,200	198,840	200,480	202,120	203,760	205,400	207,040	208,680	210,320
- General Aviation	-	-	-	175,000	177,000	179,000	181,000	183,000	185,000	187,000	189,000	191,000
- Other	222,645	218,600	125,448	-	-	-	-	-	-	-	-	-
Operating Cost/Passenger	3.19	3.30	3.43	3.39	3.42	3.63	3.48	3.50	3.50	3.52	3.54	3.54
Passenger/Person Years	37,037.21	35,431.75	35,958.97	-	-	-	-	-	-	-	-	-
Revenue/Passenger	8.84	9.38	10.78	6.01	5.95	6.12	5.86	5.82	5.77	5.73	5.70	5.66
Passenger & Cargo Fees/Passenger	1.24	1.31	1.38	1.35	1.33	1.37	1.29	1.28	1.26	1.25	1.23	1.22
Terminal Concessions/Passenger	1.27	1.45	1.33	1.56	1.56	1.62	1.57	1.57	.10	.04	.04	-
Groundside Concessions/Passenger	-	-	-	-	-	-	(.70)	-	-	-	-	-
HQ & Regional Overhead/Passenger	-	-	-	-	-	-	-	-	-	-	-	-
Terminal Operating Costs/Passenger	-	-	-	-	-	-	-	-	-	-	-	-
Airside Costs/Total Plane Movements	-	-	-	-	-	-	-	-	-	-	-	-
Plane Movement/Person Year	1,294.45	1,156.61	1,208.21	-	-	-	-	-	-	-	-	-
Total Plane Movements	222,645	218,600	235,600	372,200	375,840	379,480	383,120	386,760	390,400	394,040	397,680	401,320
Total Person Years	172	189	195	-	-	-	-	-	-	-	-	-

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT

AIRPORT NAME : VANCOUVER
AIRPORT CODE : P169 VERSION NUMBER : 020 DESCRIPTION : Case Case 2, Part 1
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER
STATEMENT OF REVENUES AND EXPENSES

HISTORICAL ——)				PROJECTED -----)									
1984	1985	1986		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			REVENUE (see attached schedules)										
22,909	25,692	34,982	Air Transportation Tax	-	-	-	-	-	-	-	-	-	-
10,577	11,825	13,205	Airfield Fees and Concessions	13,205	16,420	16,911	17,112	17,274	17,665	18,039	18,413	18,787	19,161
7,924	8,790	9,658	Passenger and Cargo, Fees and Rentals	9,658	11,542	11,880	12,026	12,215	12,499	12,780	13,061	13,342	13,623
8,117	9,716	9,299	Terminal Concessions	9,299	11,969	12,449	12,647	13,150	13,567	14,071	14,575	15,079	15,583
6,758	7,370	8,442	Groundside Concessions	8,442	9,557	9,903	10,075	10,488	10,838	11,150	11,462	11,776	12,088
3,030	2,951	3,215	Industrial Rentals, Leases and Concessions	3,215	3,560	3,666	3,719	3,847	3,955	4,054	4,153	4,252	4,351
19	-	-	Fees and Rental,Other Government Departments	-	-	-	-	-	-	-	-	-	-
59,334	65,744	78,801		43,819	53,048	54,809	55,579	56,974	58,524	60,094	61,664	63,236	64,806
			OPERATING EXPENSES (see attached schedule)										
6,181	6,667	7,592	Salaries, Wages and Benefits	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716
2,743	1,402	1,662	Materials and Supplies	1,662	1,882	1,950	1,984	2,065	2,134	2,196	2,258	2,320	2,382
5,968	8,492	8,799	Purchased Services	8,799	9,961	10,321	10,501	10,932	11,297	11,623	11,950	12,277	12,604
16	50	130	Other Direct Operating Costs	130	147	152	155	161	166	171	176	181	186
5,421	5,507	5,900	Depreciation	7,769	8,735	10,708	11,589	12,050	13,585	14,846	16,414	18,034	18,954
-	-	-	Other Expenses	2,500	2,830	2,932	2,983	3,105	3,209	3,302	3,395	3,488	3,581
-	-	-	Bad Debt Expense	-	-	-	-	-	-	-	-	-	-
20,329	22,118	24,083		27,576	30,271	32,779	33,928	35,029	37,107	38,854	40,909	43,016	44,423
39,005	43,626	54,718	**CONTRIBUTION FROM OPERATIONS**	16,243	22,777	22,030	21,651	21,945	21,417	21,240	20,755	20,220	20,383
			ALLOCATED COSTS										
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
8,004	7,348	7,620	Terminal Control Costs	-	-	-	-	-	-	-	-	-	-
4,868	2,214	7,255	Grants in Lieu of Taxes	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
17,058	14,235	19,959		7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
(7)	(125)	-	Gain (Loss) on Sale of Land	-	-	-	-	-	-	-	-	-	-
-	-	-	Net Interest Expense (Income)	850	2,159	3,451	4,728	5,334	6,117	7,336	8,504	9,623	10,691
21,940	29,266	34,759	**PROFIT (LOSS) BEFORE INCOME TAXES**	8,138	13,363	11,324	9,668	9,356	8,045	6,649	4,996	3,342	2,437
			PROVISION FOR INCOME TAXES										
-	-	-	Current Taxes	-	-	-	-	-	-	-	-	-	-
-	-	-	Deferred Taxes	-	-	-	-	-	-	-	-	-	-
21,940	29,266	34,759	**PROFIT BEFORE EXTRAORDINARY ITEMS**	8,138	13,363	11,324	9,668	9,356	8,045	6,649	4,996	3,342	2,437
-	-	-	Extraordinary Item - Loss Carryforward	-	-	-	-	-	-	-	-	-	-
21,940	29,266	34,759	**NET PROFIT (LOSS)**	8,138	13,363	11,324	9,668	9,356	8,045	6,649	4,996	3,342	2,437
90,457	112,397	141.663	**OPENING RETAINED EARNINGS**	176 422	184 560	197 923	209 247	218 915	228 271	236 316	242 965	247 961	251 303

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT

CASE CASE 2, PART 1

AIRPORT NAME : VANCOUVER AIRPORT CODE : P169 VERSION NUMBER : 020 DESCRIPTION :

ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER

STATEMENT OF CASH FLOW

HISTORICAL -----)				PROJECTED -----)									
1984	1985	1986		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			SOURCES OF CASH										
55,393	66,480	78,214	Collection of Accounts Receivable	48,763	51,618	54,536	55,459	56,758	58,284	59,850	61,421	62,992	64,563
-	127	5	Decrease in Inventory	-	-	-	-	-	-	-	-	-	-
-	1	335	Proceeds on Sale of Fixed Assets	-	-	-	-	-	-	-	-	-	-
-	-	-	Proceeds on Sale of Investments	-	-	-	-	-	-	-	-	-	-
174	89	66	Increase in Employee Termination Benefits	131	329	322	316	310	304	299	293	287	282
-	-	-	Additions to Long Term Debt	35,192	20,186	36,382	21,550	10,584	30,000	30,000	30,000	30,000	30,000
-	-	-	Additions to Share Capital	-	-	-	-	-	-	-	-	-	-
4,273	1,812	(185)	Additions to Contributed Surplus	-	-	-	-	-	-	-	-	-	-
59,840	68,509	78,435	TOTAL SOURCES	84,086	72,133	91,240	77,325	67,652	88,588	90,149	91,714	93,279	94,845
			USES OF CASH										
6,181	6,667	7,592	Salaries, Wages and Benefits	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716
27,647	29,465	36,248	Payments of Accounts Payable and Holdbacks	60,117	44,917	55,646	47,340	36,168	50,069	54,450	54,936	55,424	55,910
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Interest Expense (Income)	850	2,159	3,451	4,728	5,334	6,117	7,336	8,504	9,623	10,691
55	-	-	Increase in Inventory	1	49	16	7	19	15	14	14	14	14
-	-	-	Purchase of Investments	-	-	-	-	-	-	-	-	-	-
-	-	-	Income Taxes Paid	-	-	-	-	-	-	-	-	-	-
-	-	-	Decrease in Employee Termination Benefits	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Debt Payments	1,174	1,846	3,058	3,778	4,130	5,130	6,130	7,130	8,130	9,130
-	-	-	Redemptions of Share Capital	-	-	-	-	-	-	-	-	-	-
-	-	-	Reductions of Contributed Surplus	-	-	-	-	-	-	-	-	-	-
38,069	40,805	48,924	TOTAL USES	68,858	55,687	68,887	62,569	52,367	68,047	74,646	77,300	79,907	82,461
21,771	27,704	29,511	INCREASE (DECREASE) CASH	15,228	16,446	22,353	14,756	15,285	20,541	15,503	14,414	13,372	12,384
74,910	96,681	124,385	OPENING CASH	153,896	169,124	185,570	207,923	222,679	237,964	258,505	274,008	288,422	301,794
-	-	-	IMPUTED BANK INTEREST INCOME (EXPENSE)	-	-	-	-	-	-	-	-	-	-
96,681	124,385	153,896	CLOSING CASH	169,124	185,570	207,923	222,679	237,964	258,505	274,008	288,422	301,794	314,178

Oct, 1987

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169 VERSION NUMBER : 020 DESCRIPTION :
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

Base Case 2, Part 1

TRANSPORT CANADA

VANCOUVER
FINANCIAL RATIOS AND OPERATING STATISTICS

HISTORICAL -----)				PROJECTED -----)									
1984	1985	1986		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			FINANCIAL RATIOS										
.37	.45	.44	Net Profit Margin	.19	.25	.21	.17	.16	.14	.11	.08	.05	.04
.66	.66	.69	Operating Contribution Margin	.37	.43	.40	.39	.39	.37	.35	.34	.32	.31
.29	.26	.30	Return on Capital	.06	.08	.06	.05	.05	.04	.03	.02	.01	.01
.21	.27	.30	Return on Share Equity	.08	.13	.12	.11	.11	.11	.11	.10	.08	.08
1.22	1.43	.77	Current Ratio	.57	.76	.58	.70	.78	.57	.55	.54	.52	.94
-	-	-	Debt/Equity Ratio	.30	.47	.87	1.11	1.26	1.82	2.45	3.31	4.58	6.91
.50	.55	.59	Asset Turnover Ratio	.28	.31	.28	.27	.28	.26	.25	.24	.24	.23
			OPERATING STATISTICS AND RATIOS										
			Passenger Traffic										
4,353,890	4,618,200	4,895,000	- Domestic	4,776,670	4,839,000	4,995,000	5,089,000	5,303,000	5,489,000	5,603,000	5,717,000	5,832,000	5,946,000
2,017,890	2,078,400	2,117,000	- International	2,241,407	3,106,000	3,237,000	3,286,000	3,415,000	3,520,000	3,666,000	3,812,000	3,958,000	4,104,000
			Aircraft Movements										
-	-	110,152	- Carrier	128,316	166,500	172,300	174,700	175,500	180,000	183,440	186,880	190,320	193,760
-	-	-	- General Aviation	125,354	147,500	150,000	151,000	155,000	158,000	161,400	164,800	168,200	171,600
222,645	218,600	125,440	- Other	-	-	-	-	-	-	-	-	-	-
3.19	3.30	3.43	Operating Cost/Passenger	3.93	3.81	3.98	4.05	4.02	4.12	4.19	4.29	4.39	4.42
37,037.21	35,431.75	35,958.97	Passenger/Person Years	-	-	-	-	-	-	-	-	-	-
8.84	9.38	10.78	Revenue/Passenger	5.79	6.23	6.21	6.19	6.09	6.06	6.05	6.04	6.02	6.02
1.24	1.31	1.38	Passenger & Cargo Fees/Passenger	1.38	1.45	1.44	1.44	1.40	1.39	1.38	1.37	1.36	1.36
1.27	1.45	1.33	Terminal Concessions/Passenger	1.33	1.51	1.51	1.51	1.51	1.51	1.52	1.53	1.54	1.55
1.06	1.10	1.20	Groundside Concessions/Passenger	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
.66	.70	.73	HQ & Regional Overhead/Passenger	-	-	-	-	-	-	-	-	-	-
1.26	1.10	1.09	Terminal Operating Costs/Passenger	-	-	-	-	-	-	-	-	-	-
72.07	70.64	70.50	Airside Costs/Total Plane Movements	25.44	21.57	21.32	21.25	21.30	21.12	20.96	20.81	20.66	20.52
1,294.45	1,156.61	1,208.21	Plane Movement/Person Year	-	-	-	-	-	-	-	-	-	-
222,645	218,600	235,600	Total Plane Movements	253,670	314,000	322,300	325,700	330,500	338,000	344,840	351,680	358,520	365,360
172	189	195	Total Person Years	-	-	-	-	-	-	-	-	-	-

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169 VERSION NUMBER : 022 DESCRIPTION : Base Case 2, Part 2
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER
STATEMENT OF REVENUES AND EXPENSES

	HISTORICAL -----)			PROJECTED -----)								
	1984	1985	1986	1988	1989	1990	1991	1992	1993	1994	1995	1996
REVENUE (see attached schedules)												
Air Transportation Tax	22,909	25,692	34,982	-	-	-	-	-	-	-	-	-
Airfield Fees and Concessions	10,377	11,225	13,205	19,535	19,745	19,955	20,165	20,375	20,585	20,795	21,005	21,215
Passenger and Cargo, Fees and Rentals	7,924	8,790	9,658	13,904	14,117	14,278	14,542	14,754	14,966	15,179	15,391	15,604
Terminal Concessions	8,117	9,716	9,299	16,087	16,612	16,860	17,663	18,188	18,713	19,238	19,763	20,288
Groundside Concessions	6,758	7,370	8,442	12,400	12,775	12,501	13,526	13,901	14,276	14,651	15,026	15,401
Industrial Rentals, Leases and Concessions	3,030	2,951	3,215	4,450	4,567	4,678	4,800	4,917	5,034	5,151	5,268	5,385
Fees and Rental,Other Government Departments	19	-	-	-	-	-	-	-	-	-	-	-
	59,334	65,744	78,801	66,376	67,816	68,264	70,696	72,135	73,574	75,014	76,453	77,893
OPERATING EXPENSES (see attached schedule)												
Salaries, Wages and Benefits	6,181	6,667	7,592	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716
Materials and Supplies	2,743	1,402	1,662	2,444	2,518	2,592	2,666	2,740	2,814	2,888	2,962	3,036
Purchased Services	5,968	8,492	8,799	12,930	13,322	13,714	14,105	14,496	14,887	15,279	15,670	16,062
Other Direct Operating Costs	16	50	130	191	197	203	209	215	221	227	233	239
Depreciation	5,421	5,507	5,900	14,801	16,421	18,041	19,661	21,196	22,457	24,025	25,645	26,565
Other Expenses	-	-	-	3,674	3,785	3,896	4,007	4,118	4,229	4,340	4,451	4,562
Bad Debt Expense	-	-	-	-	-	-	-	-	-	-	-	-
	20,329	22,118	24,083	40,756	42,959	45,162	47,364	49,481	51,324	53,475	55,677	57,180
CONTRIBUTION FROM OPERATIONS	39,005	43,626	54,718	25,620	24,857	23,102	23,332	22,654	22,250	21,539	20,776	20,713
ALLOCATED COSTS												
Headquarter and Regional Overhead	4,186	4,673	5,084	-	-	-	-	-	-	-	-	-
Terminal Control Costs	8,804	7,348	7,620	-	-	-	-	-	-	-	-	-
Grants in Lieu of Taxes	4,068	2,214	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
	17,058	14,235	19,959	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
Gain (Loss) on Sale of Land	(7)	(125)	-	-	-	-	-	-	-	-	-	-
Net Interest Expense (Income)	-	-	-	13,735	14,703	15,622	16,490	17,309	18,077	18,796	19,464	20,083
PROFIT (LOSS) BEFORE INCOME TAXES	21,940	29,266	34,759	4,630	2,899	225	(413)	(1,910)	(3,082)	(4,512)	(5,943)	(6,625)
PROVISION FOR INCOME TAXES												
Current Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Deferred Taxes	-	-	-	-	-	-	-	-	-	-	-	-
PROFIT BEFORE EXTRAORDINARY ITEMS	21,940	29,266	34,759	4,630	2,899	225	(413)	(1,910)	(3,082)	(4,512)	(5,943)	(6,625)
Extraordinary Item - Loss Carryforward	-	-	-	-	-	-	-	-	-	-	-	-
NET PROFIT (LOSS)	21,940	29,266	34,759	4,630	2,899	225	(413)	(1,910)	(3,082)	(4,512)	(5,943)	(6,[illegible]

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT

Base Case 2, Part 2

AIRPORT NAME : VANCOUVER

AIRPORT CODE : P169 VERSION NUMBER : 022 DESCRIPTION :

ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER

STATEMENT OF CASH FLOW

HISTORICAL -----)				PROJECTED -----)								
1984	1985	1986		1988	1989	1990	1991	1992	1993	1994	1995	1996
			SOURCES OF CASH									
55,393	66,480	78,214	Collection of Accounts Receivable	66,133	67,593	68,194	70,319	71,912	73,351	74,791	76,230	77,670
-	127	5	Decrease in Inventory	-	-	-	-	-	-	-	-	-
-	1	335	Proceeds on Sale of Fixed Assets	-	-	-	-	-	-	-	-	-
-	-	-	Proceeds on Sale of Investments	-	-	-	-	-	-	-	-	-
174	89	66	Increase in Employee Termination Benefits	329	322	316	310	304	299	293	287	282
-	-	-	Additions to Long Term Debt	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
-	-	-	Additions to Share Capital	-	-	-	-	-	-	-	-	-
4,273	1,812	(185)	Additions to Contributed Surplus	-	-	-	-	-	-	-	-	-
59,840	68,509	78,435	TOTAL SOURCES	96,462	97,915	98,510	100,629	102,216	103,650	105,084	106,517	107,952
			USES OF CASH									
6,181	6,667	7,592	Salaries, Wages and Benefits	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716
27,647	29,465	36,248	Payments of Accounts Payable and Holdbacks	79,791	56,961	57,543	58,126	58,707	59,290	59,872	60,455	61,037
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-
-	-	-	Long term Interest Expense (Income)	13,735	14,703	15,622	16,490	17,309	18,077	18,796	19,464	20,083
55	-	-	Increase in Inventory	14	17	17	17	16	17	17	16	17
-	-	-	Purchase of Investments	-	-	-	-	-	-	-	-	-
-	-	-	Income Taxes Paid	-	-	-	-	-	-	-	-	-
-	-	-	Decrease in Employee Termination Benefits	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Debt Payments	10,130	11,130	12,130	13,130	14,130	15,130	16,130	17,130	18,130
-	-	-	Redemptions of Share Capital	-	-	-	-	-	-	-	-	-
-	-	-	Reductions of Contributed Surplus	-	-	-	-	-	-	-	-	-
38,069	40,805	48,924	TOTAL USES	110,386	89,527	92,028	94,479	96,878	99,230	101,531	103,781	105,983
21,771	27,704	29,511	INCREASE (DECREASE) CASH	13,100 (13,924)	8,388	6,482	6,150	5,338	4,420	3,553	2,736	1,969
74,910	96,681	124,385	OPENING CASH	317,718	303,794	312,182	318,664	324,814	330,152	334,572	338,125	340,861
-	-	-	IMPUTED BANK INTEREST INCOME (EXPENSE)	-	-	-	-	-	-	-	-	-
96,681	124,385	153,896	CLOSING CASH	303,794	312,182	318,664	324,814	330,152	334,572	338,125	340,861	342,830

BASE CASE 2, PART 2

TRANSPORT CANADA

VANCOUVER
FINANCIAL RATIOS AND OPERATING STATISTICS

HISTORICAL -----) 1984	1985	1986		PROJECTED -----) 1988	1989	1990	1991	1992	1993	1994	1995	1996
			FINANCIAL RATIOS									
.37	.45	.44	Net Profit Margin	.07	.04	-	(.01)	(.03)	(.04)	(.06)	(.08)	(.09)
.66	.66	.69	Operating Contribution Margin	.39	.37	.34	.33	.31	.30	.29	.27	.27
.20	.26	.30	Return on Capital	.02	.01	-	-	(.01)	(.01)	(.01)	(.02)	(.02)
.21	.27	.30	Return on Share Equity	(.26)	(.13)	(.01)	.01	.04	.06	.08	.09	.09
1.22	1.43	.77	Current Ratio	.49	.48	.46	.46	.45	.44	.43	.42	1.04
-	-	-	Debt/Equity Ratio	(15.58)	(12.64)	(10.52)	(9.04)	(7.86)	(6.97)	(6.23)	(5.61)	(5.37)
.50	.55	.59	Asset Turnover Ratio	.23	.23	.22	.22	.22	.22	.22	.22	.22
			OPERATING STATISTICS AND RATIOS									
			Passenger Traffic									
4,353,200	4,610,200	4,895,000	- Domestic	6,060,000	6,228,000	5,856,000	6,564,000	6,732,000	6,900,000	7,068,000	7,236,000	7,404,000
2,017,200	2,078,400	2,117,000	- International	4,250,000	4,394,000	4,538,000	4,682,000	4,826,000	4,970,000	5,114,000	5,258,000	5,402,000
			Aircraft Movements									
-	-	110,152	- Carrier	197,200	198,840	200,480	202,120	203,760	205,400	207,040	208,680	210,320
-	-	-	- General Aviation	175,000	177,000	179,000	181,000	183,000	185,000	187,000	189,000	191,000
222,645	210,600	125,448	- Other	-	-	-	-	-	-	-	-	-
3.19	3.30	3.43	Operating Cost/Passenger	3.95	4.04	4.35	4.21	4.28	4.32	4.39	4.46	4.47
37,037.21	35,431.75	35,950.97	Passenger/Person Years	-	-	-	-	-	-	-	-	-
8.84	9.38	10.78	Revenue/Passenger	6.01	5.95	6.12	5.86	5.82	5.77	5.73	5.70	5.66
1.24	1.31	1.38	Passenger & Cargo Fees/Passenger	1.35	1.33	1.37	1.29	1.28	1.26	1.25	1.23	1.22
1.27	1.45	1.33	Terminal Concessions/Passenger	1.56	1.56	1.62	1.57	1.57	1.58	1.58	1.58	1.58
1.06	1.10	1.20	Groundside Concessions/Passenger	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
.66	.70	.73	HQ & Regional Overhead/Passenger	-	-	-	-	-	-	-	-	-
1.86	1:10	1.09	Terminal Operating Costs/Passenger	-	-	-	-	-	-	-	-	-
72.07	70.64	70.50	Airside Costs/Total Plane Movements	20.39	20.48	20.57	20.65	20.74	20.82	20.90	20.98	21.06
1,294.45	1,156.61	1,208.21	Plane Movement/Person Year	-	-	-	-	-	-	-	-	-
222,645	210,600	235,600	Total Plane Movements	372,200	375,840	379,480	383,120	386,760	390,400	394,040	397,680	401,320
172	189	195	Total Person Years	-	-	-	-	-	-	-	-	-

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169 VERSION NUMBER : 019 DESCRIPTION : SPECULATIVE
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

CASE 1 : 2, PART 1

TRANSPORT CANADA

VANCOUVER
STATEMENT OF CASH FLOW

HISTORICAL -----)				PROJECTED -----)									
1984	1985	1986		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			SOURCES OF CASH										
55,393	66,480	78,214	Collection of Accounts Receivable	48,763	51,393	54,387	55,615	57,325	59,206	61,147	63,120	65,126	67,163
-	127	5	Decrease in Inventory	-	-	4	-	-	-	-	-	-	-
-	1	335	Proceeds on Sale of Fixed Assets	-	-	-	-	-	-	-	-	-	-
-	-	-	Proceeds on Sale of Investments	-	-	-	-	-	-	-	-	-	-
174	89	66	Increase in Employee Termination Benefits	131	311	288	282	277	272	266	261	256	252
-	-	-	Additions to Long Term Debt	17,596	15,093	23,191	15,775	5,292	15,000	15,000	15,000	15,000	15,000
-	-	-	Additions to Share Capital	-	-	-	-	-	-	-	-	-	-
4,273	1,812	(185)	Additions to Contributed Surplus	-	-	-	-	-	-	-	-	-	-
59,840	68,509	78,435	TOTAL SOURCES	66,490	66,797	77,870	71,672	62,894	74,478	76,413	78,381	80,382	82,415
			USES OF CASH										
6,181	6,667	7,592	Salaries, Wages and Benefits	6,716	6,380	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061
27,647	29,465	36,248	Payments of Accounts Payable and Holdbacks	46,041	36,798	42,875	38,747	29,445	35,650	38,057	38,513	38,970	39,426
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Interest Expense (Income)	425	1,201	2,084	2,952	3,354	3,721	4,305	4,865	5,399	5,910
55	-	-	Increase in Inventory	1	30	-	8	18	15	13	13	13	13
-	-	-	Purchase of Investments	-	-	-	-	-	-	-	-	-	-
-	-	-	Income Taxes Paid	-	-	-	-	-	-	-	-	-	-
-	-	-	Decrease in Employee Termination Benefits	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Debt Payments	587	1,090	1,863	2,389	2,565	3,065	3,565	4,065	4,565	5,065
-	-	-	Redemptions of Share Capital	-	-	-	-	-	-	-	-	-	-
-	-	-	Reductions of Contributed Surplus	-	-	-	-	-	-	-	-	-	-
38,069	40,805	48,924	TOTAL USES	53,770	45,499	52,883	50,157	41,443	48,512	52,001	53,517	55,008	56,473
21,771	27,704	29,511	INCREASE (DECREASE) CASH	12,720	21,298	24,987	21,515	21,451	25,966	24,412	24,864	25,374	25,942
74,910	96,681	124,385	OPENING CASH	153,896	166,616	187,914	212,901	234,416	255,867	281,833	306,245	331,109	356,483
-	-	-	IMPUTED BANK INTEREST INCOME (EXPENSE)	-	-	-	-	-	-	-	-	-	-
96,681	124,385	153,896	CLOSING CASH	166,616	187,914	212,901	234,416	255,867	281,833	306,245	331,109	356,483	382,425

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169 VERSION NUMBER : 019 DESCRIPTION : SPECULATIVE
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

CASE 1 & 2, PART 1

TRANSPORT CANADA

VANCOUVER
STATEMENT OF REVENUES AND EXPENSES

HISTORICAL ----)				PROJECTED ----)									
1984	1985	1986		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			REVENUE (see attached schedules)										
22,909	25,692	34,982	Air Transportation Tax	-	-	-	-	-	-	-	-	-	-
10,577	11,225	13,205	Airfield Fees and Concessions	13,205	16,420	16,960	17,182	17,362	17,763	18,148	18,533	18,910	19,303
7,924	8,790	9,658	Passenger and Cargo, Fees and Rentals	9,658	11,428	11,678	11,836	12,038	12,324	12,605	12,887	13,169	13,452
8,117	9,716	9,299	Terminal Concessions	9,299	11,969	12,747	13,229	14,084	14,828	15,698	16,597	17,527	18,487
6,758	7,370	8,442	Groundside Concessions	8,442	9,557	9,937	10,126	10,581	10,941	11,263	11,506	11,910	12,233
3,030	2,951	3,215	Industrial Rentals, Leases and Concessions	3,215	3,408	3,360	3,413	3,542	3,644	3,734	3,824	3,914	4,004
19	-	-	Fees and Rental,Other Government Departments	-	-	-	-	-	-	-	-	-	-
59,334	65,744	78,801		43,819	52,782	54,682	55,786	57,607	59,500	61,448	63,427	65,430	67,479
			OPERATING EXPENSES (see attached schedule)										
6,181	6,667	7,592	Salaries, Wages and Benefits	6,716	6,380	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061
2,743	1,402	1,662	Materials and Supplies	1,662	1,798	1,779	1,813	1,895	1,959	2,017	2,075	2,133	2,191
5,968	8,492	8,799	Purchased Services	8,799	9,521	9,423	9,603	10,036	10,377	10,682	10,988	11,295	11,601
16	50	130	Other Direct Operating Costs	130	141	140	143	149	154	159	164	169	174
5,421	5,507	5,900	Depreciation	6,542	7,226	8,411	9,052	9,283	10,008	10,459	11,217	12,027	12,487
-	-	-	Other Expenses	2,500	2,705	2,677	2,728	2,851	2,948	3,035	3,122	3,209	3,296
-	-	-	Bad Debt Expense	-	-	-	-	-	-	-	-	-	-
20,329	22,118	24,083		26,349	27,771	28,491	29,400	30,275	31,507	32,413	33,627	34,894	35,810
39,005	43,626	54,718	**CONTRIBUTION FROM OPERATIONS**	17,470	25,011	26,191	26,386	27,332	27,993	29,035	29,800	30,544	31,669
			ALLOCATED COSTS										
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
8,004	7,348	7,620	Terminal Control Costs	-	-	-	-	-	-	-	-	-	-
4,868	2,214	7,255	Grants in Lieu of Taxes	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
17,058	14,235	19,959		7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
(7)	(125)	-	Gain (Loss) on Sale of Land	-	-	-	-	-	-	-	-	-	-
-	-	-	Net Interest Expense (Income)	425	1,201	2,084	2,952	3,354	3,721	4,305	4,865	5,399	5,908
21,940	29,266	34,759	**PROFIT (LOSS) BEFORE INCOME TAXES**	9,790	16,555	16,852	16,179	16,723	17,017	17,475	17,680	17,890	18,506
			PROVISION FOR INCOME TAXES										
-	-	-	Current Taxes	-	-	-	-	-	-	-	-	-	-
-	-	-	Deferred Taxes	-	-	-	-	-	-	-	-	-	-
21,940	29,266	34,759	**PROFIT BEFORE EXTRAORDINARY ITEMS**	9,790	16,555	16,852	16,179	16,723	17,017	17,475	17,680	17,890	18,506
-	-	-	Extraordinary Item - Loss Carryforward	-	-	-	-	-	-	-	-	-	-
21,940	29,266	34,759	**NET PROFIT (LOSS)**	9,790	16,555	16,852	16,179	16,723	17,017	17,475	17,680	17,890	18,506
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169 VERSION NUMBER : 019 DESCRIPTION : SPECULATIVE
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

CASE 1 : 2, PART 1

TRANSPORT CANADA

VANCOUVER
FINANCIAL RATIOS AND OPERATING STATISTICS

	HISTORICAL ----)			PROJECTED ----)									
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
FINANCIAL RATIOS													
Net Profit Margin	.37	.45	.44	.22	.31	.31	.29	.29	.29	.28	.28	.27	.27
Operating Contribution Margin	.66	.66	.69	.40	.47	.48	.47	.47	.47	.47	.47	.47	.47
Return on Capital	.28	.26	.30	.07	.12	.11	.10	.11	.11	.10	.10	.10	.10
Return on Share Equity	.21	.27	.30	.09	.15	.17	.17	.19	.21	.24	.27	.30	.36
Current Ratio	1.22	1.43	.77	.83	.94	.79	.90	1.06	.87	.85	.84	.83	1.35
Debt/Equity Ratio	-	-	-	.14	.27	.50	.67	.73	.95	1.19	1.48	1.83	2.39
Asset Turnover Ratio	.50	.55	.59	.31	.35	.33	.32	.34	.34	.34	.35	.35	.36
OPERATING STATISTICS AND RATIOS													
Passenger Traffic													
- Domestic	4,353,200	4,618,200	4,895,000	4,776,670	4,839,000	5,010,600	5,114,330	5,350,905	5,542,343	5,659,742	5,777,172	5,895,665	6,013,158
- International	2,017,200	2,078,400	2,117,000	2,241,407	3,106,000	3,250,100	3,304,218	3,446,905	3,555,005	3,705,406	3,855,927	4,006,563	4,157,310
Aircraft Movements													
- Carrier	-	-	110,152	128,316	166,500	172,880	175,529	176,412	181,026	184,555	188,085	191,616	195,149
- General Aviation	-	-	-	125,354	147,500	150,250	151,352	155,762	158,837	162,324	165,811	169,301	172,791
- Other	822,645	218,600	125,448	-	-	-	(1)	5	5	4	5	5	6
Operating Cost/Passenger	3.19	3.30	3.43	3.73	3.50	3.45	3.49	3.44	3.46	3.46	3.49	3.52	3.52
Passenger/Person Years	37,037.21	35,431.75	35,958.97	-	-	-	-	-	-	-	-	-	-
Revenue/Passenger	8.84	9.38	10.78	5.79	6.21	6.21	6.22	6.15	6.14	6.16	6.19	6.21	6.24
Passenger & Cargo Fees/Passenger	1.26	1.31	1.38	1.38	1.44	1.41	1.41	1.37	1.35	1.35	1.34	1.33	1.32
Terminal Concessions/Passenger	1.27	1.45	1.33	1.33	1.51	1.54	1.57	1.60	1.63	1.68	1.72	1.77	1.82
Groundside Concessions/Passenger	1.06	1.10	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
HQ & Regional Overhead/Passenger	.66	.70	.73	-	-	-	-	-	-	-	-	-	-
Terminal Operating Costs/Passenger	1.26	1.10	1.09	-	-	-	-	-	-	-	-	-	-
Airside Costs/Total Plane Movements	72.07	70.64	70.50	25.44	20.84	19.85	19.77	19.82	19.64	19.49	19.34	19.20	19.06
Plane Movement/Person Year	1,294.45	1,156.61	1,208.21	-	-	-	-	-	-	-	-	-	-
Total Plane Movements	222,645	218,600	235,600	253,670	314,000	323,130	326,880	332,179	339,868	346,883	353,901	360,922	367,946
Total Person Years	172	189	195	-	-	-	-	-	-	-	-	-	-

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169 VERSION NUMBER : 023 DESCRIPTION : SPECULATIVE
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

CASE 1, PART 2

TRANSPORT CANADA

VANCOUVER
STATEMENT OF REVENUES AND EXPENSES

	HISTORICAL -----)			PROJECTED -----)								
	1984	1985	1986	1988	1989	1990	1991	1992	1993	1994	1995	1996
REVENUE (see attached schedules)												
Air Transportation Tax	22,909	25,692	34,982	-	-	-	-	-	-	-	-	-
Airfield Fees and Concessions	10,377	11,225	13,205	19,688	19,904	20,120	20,336	20,552	20,768	20,984	21,201	21,417
Passenger and Cargo, Fees and Rentals	7,924	8,790	9,658	13,735	13,948	14,161	14,374	14,587	14,800	15,013	15,226	15,439
Terminal Concessions	8,117	9,716	9,299	19,479	20,530	21,616	22,738	23,898	25,094	26,330	27,604	28,920
Groundside Concessions	6,750	7,370	8,442	12,556	12,944	13,332	13,720	14,109	14,498	14,887	15,276	15,665
Industrial Rentals, Leases and Concessions	3,030	2,951	3,215	4,094	4,204	4,314	4,424	4,534	4,644	4,754	4,864	4,974
Fees and Rental,Other Government Departments	19	-	-	-	-	-	-	-	-	-	-	-
	59,334	65,744	78,801	69,552	71,530	73,543	75,592	77,680	79,804	81,968	84,171	86,415
OPERATING EXPENSES (see attached schedule)												
Salaries, Wages and Benefits	6,101	6,667	7,592	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061
Materials and Supplies	2,743	1,402	1,662	2,249	2,318	2,388	2,457	2,527	2,596	2,666	2,736	2,806
Purchased Services	5,968	8,492	8,799	11,907	12,275	12,643	13,011	13,379	13,747	14,115	14,483	14,852
Other Direct Operating Costs	16	50	130	179	185	191	197	203	209	215	221	227
Depreciation	5,421	5,507	5,900	9,438	10,248	11,058	11,868	12,593	13,044	13,802	14,612	15,072
Other Expenses	-	-	-	3,363	3,488	3,593	3,698	3,803	3,908	4,013	4,118	4,223
Bad Debt Expense	-	-	-	-	-	-	-	-	-	-	-	-
	20,329	22,118	24,083	33,217	34,575	35,934	37,292	38,566	39,565	40,872	42,231	43,241
CONTRIBUTION FROM OPERATIONS	39,005	43,626	54,718	36,335	36,955	37,609	38,300	39,114	40,239	41,096	41,940	43,174
ALLOCATED COSTS												
Headquarter and Regional Overhead	4,106	4,673	5,084	-	-	-	-	-	-	-	-	-
Terminal Control Costs	8,004	7,348	7,620	-	-	-	-	-	-	-	-	-
Grants in Lieu of Taxes	4,868	2,214	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
	17,058	14,235	19,959	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
Gain (Loss) on Sale of Land	(7)	(125)	-	-	-	-	-	-	-	-	-	-
Net Interest Expense (Income)	-	-	-	7,500	8,039	8,473	8,883	9,267	9,626	9,960	10,270	10,554
PROFIT (LOSS) BEFORE INCOME TAXES	21,940	29,266	34,759	21,500	21,661	21,881	22,162	22,592	23,358	23,881	24,415	25,365
PROVISION FOR INCOME TAXES												
Current Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Deferred Taxes	-	-	-	-	-	-	-	-	-	-	-	-
PROFIT BEFORE EXTRAORDINARY ITEMS	21,940	29,266	34,759	21,500	21,661	21,881	22,162	22,592	23,358	23,881	24,415	25,365
Extraordinary Item - Loss Carryforward	-	-	-	-	-	-	-	-	-	-	-	-
NET PROFIT (LOSS)	21,940	29,266	34,759	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169 VERSION NUMBER : 023 DESCRIPTION : SPECULATIVE
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

CASE 1, PART 2

TRANSPORT CANADA

VANCOUVER
STATEMENT OF CASH FLOW

HISTORICAL -----) 1984	1985	1986		PROJECTED -----) 1988	1989	1990	1991	1992	1993	1994	1995	1996
			SOURCES OF CASH									
55,393	66,480	78,214	Collection of Accounts Receivable	69,230	71,224	73,231	75,274	77,357	79,474	81,633	83,829	86,068
-	127	5	Decrease in Inventory	-	-	-	-	-	-	-	-	-
-	1	335	Proceeds on Sale of Fixed Assets	-	-	-	-	-	-	-	-	-
-	-	-	Proceeds on Sale of Investments	-	-	-	-	-	-	-	-	-
174	89	66	Increase in Employee Termination Benefits	294	289	283	278	272	267	262	257	252
-	-	-	Additions to Long Term Debt	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
-	-	-	Additions to Share Capital	-	-	-	-	-	-	-	-	-
4,273	1,012	(185)	Additions to Contributed Surplus	-	-	-	-	-	-	-	-	-
59,840	68,509	78,435	TOTAL SOURCES	84,524	86,513	88,514	90,552	92,629	94,741	96,895	99,086	101,320
			USES OF CASH									
6,181	6,667	7,592	Salaries, Wages and Benefits	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061
27,647	29,465	36,248	Payments of Accounts Payable and Holdbacks	48,503	40,412	40,960	41,508	42,058	42,605	43,154	43,703	44,253
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-
-	-	-	Long term Interest Expense (Income)	7,580	8,039	8,473	8,883	9,267	9,626	9,960	10,270	10,554
55	-	-	Increase in Inventory	13	16	16	15	16	16	16	15	16
-	-	-	Purchase of Investments	-	-	-	-	-	-	-	-	-
-	-	-	Income Taxes Paid	-	-	-	-	-	-	-	-	-
-	-	-	Decrease in Employee Termination Benefits	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Debt Payments	5,565	6,065	6,565	7,065	7,565	8,065	8,565	9,065	9,565
-	-	-	Redemptions of Share Capital	-	-	-	-	-	-	-	-	-
-	-	-	Reductions of Contributed Surplus	-	-	-	-	-	-	-	-	-
38,069	40,805	48,924	TOTAL USES	67,722	60,593	62,075	63,532	64,967	66,373	67,756	69,114	70,449
21,771	27,704	29,511	INCREASE (DECREASE) CASH	25,926 ~~16,802~~	25,920	26,439	27,020	27,662	28,368	29,139	29,972	30,871
74,910	96,681	124,385	OPENING CASH	277,992	294,794	320,714	347,153	374,173	401,835	430,203	459,342	489,314
-	-	-	IMPUTED BANK INTEREST INCOME (EXPENSE)	-	-	-	-	-	-	-	-	-
96,681	124,385	153,896	CLOSING CASH	294,794	320,714	347,153	374,173	401,835	430,203	459,342	489,314	520,185

Nov, 1987

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169 VERSION NUMBER : 023 DESCRIPTION : SPECULATIVE
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

CASE 2, PART 2

TRANSPORT CANADA

VANCOUVER
FINANCIAL RATIOS AND OPERATING STATISTICS

HISTORICAL -----> 1984	1985	1986		PROJECTED -----> 1988	1989	1990	1991	1992	1993	1994	1995	1996
			FINANCIAL RATIOS									
.37	.45	.44	Net Profit Margin	.31	.30	.30	.29	.29	.29	.29	.29	.29
.66	.66	.69	Operating Contribution Margin	.52	.52	.51	.51	.50	.50	.50	.50	.50
.20	.26	.30	Return on Capital	.12	.12	.12	.12	.12	.12	.12	.13	.13
.21	.27	.30	Return on Share Equity	1.04	1.32	1.85	3.18	11.95	(7.49)	(2.85)	(1.75)	(1.30)
1.22	1.43	.77	Current Ratio	.81	.80	.79	.78	.77	.76	.75	.75	1.54
-	-	-	Debt/Equity Ratio	7.28	9.69	14.10	25.01	95.76	(60.07)	(23.00)	(14.27)	(11.00)
.50	.55	.59	Asset Turnover Ratio	.37	.37	.37	.37	.38	.38	.39	.40	.41
			OPERATING STATISTICS AND RATIOS									
			Passenger Traffic									
4,353,200	4,618,200	4,095,000	- Domestic	6,130,088	6,304,215	6,477,634	6,651,142	6,824,738	6,998,419	7,172,102	7,346,028	7,519,953
2,017,200	2,078,400	2,117,000	- International	4,308,165	4,457,055	4,606,043	4,755,125	4,904,299	5,053,562	5,202,912	5,352,345	5,501,861
			Aircraft Movements									
-	-	119,152	- Carrier	198,683	200,369	202,054	203,741	205,427	207,114	208,801	210,489	212,177
-	-	-	- General Aviation	176,283	178,338	180,394	182,450	184,506	186,563	188,620	190,678	192,736
222,645	210,600	125,440	- Other	6	5	5	4	5	4	4	3	2
3.19	3.30	3.43	Operating Cost/Passenger	3.10	3.21	3.24	3.27	3.29	3.28	3.30	3.33	3.32
37,037.21	35,431.75	35,950.97	Passenger/Person Years	-	-	-	-	-	-	-	-	-
8.84	9.38	10.70	Revenue/Passenger	6.27	6.26	6.25	6.24	6.24	6.24	6.24	6.25	6.25
1.24	1.31	1.36	Passenger & Cargo Fees/Passenger	1.32	1.30	1.28	1.26	1.24	1.23	1.21	1.20	1.19
1.27	1.45	1.33	Terminal Concessions/Passenger	1.87	1.91	1.95	1.99	2.04	2.08	2.13	2.17	2.22
1.46	1.10	1.20	Groundside Concessions/Passenger	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
.66	.70	.73	HQ & Regional Overhead/Passenger	-	-	-	-	-	-	-	-	-
1.26	1.10	1.09	Terminal Operating Costs/Passenger	-	-	-	-	-	-	-	-	-
72.07	70.64	70.50	Airside Costs/Total Plane Movements	18.94	19.02	19.10	19.18	19.26	19.33	19.41	19.48	19.55
1,294.45	1,156.61	1,208.21	Plane Movement/Person Year	-	-	-	-	-	-	-	-	-
222,645	210,600	235,600	Total Plane Movements	374,972	378,712	382,453	386,195	389,938	393,681	397,425	401,170	404,915
172	189	195	Total Person Years	-	-	-	-	-	-	-	-	-

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT

AIRPORT NAME : VANCOUVER

AIRPORT CODE : P169 VERSION NUMBER : 024 DESCRIPTION :

ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

SPECULATIVE

CASE 2, PART 2

TRANSPORT CANADA

VANCOUVER

STATEMENT OF REVENUES AND EXPENSES

	HISTORICAL -----)			PROJECTED -----)								
	1984	1985	1986	1988	1989	1990	1991	1992	1993	1994	1995	1996
REVENUE (see attached schedules)												
Air Transportation Tax	22,909	25,692	34,982	-	-	-	-	-	-	-	-	-
Airfield Fees and Concessions	10,577	11,225	13,205	19,688	19,904	20,120	20,336	20,552	20,768	20,984	21,201	21,417
Passenger and Cargo, Fees and Rentals	7,924	8,790	9,658	13,735	13,948	14,161	14,374	14,587	14,800	15,013	15,226	15,439
Terminal Concessions	8,117	9,716	9,299	19,479	20,530	21,616	22,738	23,898	25,094	26,330	27,604	28,920
Groundside Concessions	6,758	7,370	8,442	12,556	12,944	13,332	13,720	14,109	14,498	14,8[illegible]	[illegible]5,276	15,665
Industrial Rentals, Leases and Concessions	3,030	2,951	3,215	4,094	4,204	4,314	4,424	4,534	4,644	4,75[illegible]	4,864	4,974
Fees and Rental,Other Government Departments	19	-	-	-	-	-	-	-	-	-	-	-
	59,334	65,744	78,801	69,552	71,530	73,543	75,592	77,680	79,804	81,968	84,171	86,415
OPERATING EXPENSES (see attached schedule)												
Salaries, Wages and Benefits	6,181	6,667	7,592	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061
Materials and Supplies	2,743	1,402	1,662	2,249	2,318	2,388	2,457	2,527	2,596	2,666	2,736	2,806
Purchased Services	5,968	8,492	8,799	11,907	12,275	12,643	13,011	13,379	13,747	14,115	14,483	14,852
Other Direct Operating Costs	16	50	130	179	185	191	197	203	209	215	221	227
Depreciation	5,421	5,507	5,900	11,438	14,248	16,058	16,868	17,593	18,044	18,802	19,612	20,072
Other Expenses	-	-	-	3,383	3,488	3,593	3,698	3,803	3,908	4,013	4,118	4,223
Bad Debt Expense	-	-	-	-	-	-	-	-	-	-	-	-
	20,329	22,118	24,083	35,217	38,575	40,934	42,292	43,566	44,565	45,872	47,231	48,241
CONTRIBUTION FROM OPERATIONS	39,005	43,626	54,718	34,335	32,955	32,609	33,300	34,114	35,239	36,096	36,940	38,174
ALLOCATED COSTS												
Headquarter and Regional Overhead	4,186	4,673	5,084	-	-	-	-	-	-	-	-	-
Terminal Control Costs	8,004	7,348	7,620	-	-	-	-	-	-	-	-	-
Grants in Lieu of Taxes	4,868	2,214	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
	17,058	14,235	19,959	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
Gain (Loss) on Sale of Land	(7)	(125)	-	-	-	-	-	-	-	-	-	-
Net Interest Expense (Income)	-	-	-	8,788	11,623	13,744	14,570	14,746	14,897	15,023	15,124	15,200
PROFIT (LOSS) BEFORE INCOME TAXES	21,940	29,266	34,759	18,292	14,077	11,610	11,475	12,113	13,087	13,818	14,561	15,719
PROVISION FOR INCOME TAXES												
Current Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Deferred Taxes	-	-	-	-	-	-	-	-	-	-	-	-
PROFIT BEFORE EXTRAORDINARY ITEMS	21,940	29,266	34,759	18,292	14,077	11,610	11,475	12,113	13,087	13,818	14,561	15,719
Extraordinary Item - Loss Carryforward	-	-	-	-	-	-	-	-	-	-	-	-
NET PROFIT (LOSS)	21,940	29,266	34,759	18,292	14,077	11,610	11,475	12,113	13,087	13,818	14,561	15,719
OPENING RETAINED EARNINGS	90,457	112,397	141,663	201,023	219,315	233,392	245.002	256.477	268.590	281.677	295.495	310.056

Oct, 1987

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169 VERSION NUMBER : 024 DESCRIPTION : SPECULATIVE
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

CASE 2, PART 2

TRANSPORT CANADA

VANCOUVER
STATEMENT OF CASH FLOW

	HISTORICAL -----)			PROJECTED -----)								
	1984	1985	1986	1988	1989	1990	1991	1992	1993	1994	1995	1996
SOURCES OF CASH												
Collection of Accounts Receivable	55,393	66,480	78,214	69,230	71,224	73,231	75,274	77,357	79,474	81,633	83,829	86,068
Decrease in Inventory	-	127	5	-	-	-	-	-	-	-	-	-
Proceeds on Sale of Fixed Assets	-	1	335	-	-	-	-	-	-	-	-	-
Proceeds on Sale of Investments	-	-	-	-	-	-	-	-	-	-	-	-
Increase in Employee Termination Benefits	174	89	66	294	289	283	278	272	267	262	257	252
Additions to Long Term Debt	-	-	-	65,000	65,000	40,000	15,000	15,000	15,000	15,000	15,000	15,000
Additions to Share Capital	-	-	-	-	-	-	-	-	-	-	-	-
Additions to Contributed Surplus	4,273	1,812	(185)	-	-	-	-	-	-	-	-	-
TOTAL SOURCES	59,840	68,509	78,435	134,524	136,513	113,514	90,552	92,629	94,741	96,895	99,086	101,320
USES OF CASH												
Salaries, Wages and Benefits	6,181	6,667	7,592	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061
Payments of Accounts Payable and Holdbacks	27,647	29,465	36,248	88,503	90,412	70,960	46,508	42,058	42,605	43,154	43,703	44,253
Headquarter and Regional Overhead	4,186	4,673	5,084	-	-	-	-	-	-	-	-	-
Long Term Interest Expense (Income)	-	-	-	8,788	11,623	13,744	14,570	14,746	14,897	15,023	15,124	15,200
Increase in Inventory	55	-	-	13	16	16	15	16	16	16	15	16
Purchase of Investments	-	-	-	-	-	-	-	-	-	-	-	-
Income Taxes Paid	-	-	-	-	-	-	-	-	-	-	-	-
Decrease in Employee Termination Benefits	-	-	-	-	-	-	-	-	-	-	-	-
Long Term Debt Payments	-	-	-	7,232	9,398	10,732	11,232	11,732	12,232	12,732	13,232	13,732
Redemptions of Share Capital	-	-	-	-	-	-	-	-	-	-	-	-
Reductions of Contributed Surplus	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL USES	38,069	40,805	48,924	110,597	117,510	101,513	78,386	74,613	75,811	76,986	78,135	79,262
INCREASE (DECREASE) CASH	21,771	27,704	29,511	33,500 ~~23,927~~	19,003	12,001	12,166	18,016	18,930	19,909	20,951	22,058
OPENING CASH	74,910	96,681	124,385	277,992	301,919	320,922	332,923	345,089	363,105	382,035	401,944	422,895
IMPUTED BANK INTEREST INCOME (EXPENSE)	-	-	-	-	-	-	-	-	-	-	-	-
CLOSING CASH	96,681	124,385	153,896	301,919	320,922	332,923	345,089	363,105	382,035	401,944	422,895	444,953

8 Dec, 1987

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169 VERSION NUMBER : 024 DESCRIPTION :
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

SPECULATIVE
CASE 2, PART 2

TRANSPORT CANADA

VANCOUVER
FINANCIAL RATIOS AND OPERATING STATISTICS

HISTORICAL -----) 1984	1985	1986		PROJECTED -----) 1988	1989	1990	1991	1992	1993	1994	1995	1996
			FINANCIAL RATIOS									
.37	.45	.44	Net Profit Margin	.26	.20	.16	.15	.16	.16	.17	.17	.18
.66	.66	.69	Operating Contribution Margin	.49	.46	.44	.44	.44	.44	.44	.44	.44
.20	.26	.30	Return on Capital	.09	.05	.04	.04	.04	.05	.05	.05	.05
.21	.27	.30	Return on Share Equity	1.78	2.62	2.33	2.67	(7.53)	(1.76)	(1.02)	(.73)	(.60)
1.22	1.43	.77	Current Ratio	.42	.41	.50	.62	.62	.62	.61	.61	1.54
-	-	-	Debt/Equity Ratio	18.95	46.41	55.83	65.57	(176.71)	(38.46)	(21.29)	(14.2[illegible])	(11.60)
.50	.55	.59	Asset Turnover Ratio	.29	.25	.23	.24	.25	.26	.27	.28	.29
			OPERATING STATISTICS AND RATIOS									
			Passenger Traffic									
4,353,200	4,618,200	4,895,000	- Domestic	6,130,888	6,304,215	6,477,634	6,651,142	6,824,738	6,998,419	7,172,182	7,346,028	7,519,953
2,017,200	2,078,400	2,117,000	- International	4,308,165	4,457,055	4,606,043	4,755,125	4,904,299	5,053,562	5,202,912	5,352,345	5,501,861
			Aircraft Movements									
-	-	110,152	- Carrier	198,683	200,369	202,054	203,741	205,427	207,114	208,801	210,489	212,177
-	-	-	- General Aviation	176,283	178,338	180,394	182,450	184,506	186,563	188,620	190,678	192,736
222,645	218,600	125,448	- Other	6	5	5	4	5	4	4	3	2
3.19	3.30	3.43	Operating Cost/Passenger	3.37	3.50	3.69	3.71	3.71	3.70	3.71	3.72	3.70
37,037.21	35,431.75	35,958.97	Passenger/Person Years	-	-	-	-	-	-	-	-	-
8.84	9.38	10.78	Revenue/Passenger	6.27	6.26	6.25	6.24	6.24	6.24	6.24	6.25	6.25
1.24	1.31	1.38	Passenger & Cargo Fees/Passenger	1.32	1.30	1.28	1.26	1.24	1.23	1.21	1.20	1.19
1.27	1.45	1.33	Terminal Concessions/Passenger	1.87	1.91	1.95	1.99	2.04	2.08	2.13	2.17	2.22
1.06	1.10	1.20	Groundside Concessions/Passenger	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
.66	.70	.73	HQ & Regional Overhead/Passenger	-	-	-	-	-	-	-	-	-
1.26	1.10	1.09	Terminal Operating Costs/Passenger	-	-	-	-	-	-	-	-	-
72.07	70.64	70.50	Airside Costs/Total Plane Movements	18.94	19.02	19.10	19.18	19.26	19.33	19.41	19.48	19.55
1,294.45	1,156.61	1,208.21	Plane Movement/Person Year	-	-	-	-	-	-	-	-	-
222,645	218,600	235,600	Total Plane Movements	374,972	378,712	382,453	386,195	389,938	393,681	397,425	401,170	404,915
172	189	195	Total Person Years	-	-	-	-	-	-	-	-	-

21 OCT, 1987

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : [illegible] VERSION NUMBER : 011 DESCRIPTION :
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER
STATEMENT OF REVENUES AND EXPENSES

	HISTORICAL 1984	1985	1986	PROJECTED 1987 1988	1988	1989	1990	1991	1992	1993	1994	1995	1996 /97
REVENUE (see attached schedules)													
Air Transportation Tax	[illegible]	25,192	24,982	-	-	-	-	-	-	-	-	-	-
Airfield Fees and Concessions	10,577	11,225	13,205	13,205	16,420	16,911	17,102	17,276	17,665	18,039	18,413	18,787	19,161
Passenger and Cargo, Fees and Rentals	7,324	8,290	9,158	9,658	11,542	11,890	12,066	12,215	12,439	12,700	13,061	13,342	13,623
Terminal Concessions	8,117	3,716	9,279	9,299	11,969	12,449	12,647	13,150	13,567	14,071	14,575	15,079	15,583
Groundside Concessions	6,750	7,330	8,442	8,442	9,557	9,903	10,075	10,486	10,838	11,150	11,462	11,776	12,088
Industrial Rentals, Leases and Concessions	3,030	2,751	3,215	3,215	3,560	3,666	3,719	3,847	3,955	4,054	4,153	4,252	4,351
Fees and Rental, Other Government Departments	19	-	-	-	-	-	-	-	-	-	-	-	-
	59,336	65,744	78,004	43,819	53,048	54,809	55,579	56,974	58,524	60,094	61,664	63,236	64,806
OPERATING EXPENSES (see attached schedule)													
Salaries, Wages and Benefits	6,181	6,667	7,592	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716
Materials and Supplies	2,713	1,402	1,662	1,662	1,982	1,950	1,984	2,065	2,134	2,196	2,258	2,320	2,382
Purchased Services	5,908	8,192	8,799	8,799	9,961	10,321	10,504	10,932	11,297	11,623	11,950	12,277	12,604
Other Direct Operating Costs	16	50	130	130	147	152	155	161	166	171	176	181	186
Depreciation	5,421	5,507	5,909	6,542	7,066	8,911	9,452	8,483	9,498	9,859	10,617	11,427	11,887
Other Expenses	-	-	-	2,500	2,830	2,932	2,980	3,105	3,209	3,302	3,335	3,400	3,501
Bad Debt Expense	-	-	-	-	-	-	-	-	-	-	-	-	-
	20,329	22,118	24,001	26,349	28,582	30,082	30,791	31,462	32,930	33,867	35,112	36,409	37,356
CONTRIBUTION FROM OPERATIONS	39,007	43,626	54,718	17,470	24,466	24,727	24,788	25,512	25,594	26,227	26,552	26,827	27,450
ALLOCATED COSTS													
Headquarter and Regional Overhead	4,186	4,673	5,084	-	-	-	-	-	-	-	-	-	-
Terminal Control Costs	8,004	7,348	7,620	-	-	-	-	-	-	-	-	-	-
Grants in Lieu of Taxes	4,868	2,214	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
	17,058	14,235	19,959	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
Gain (Loss) on Sale of Land	(7)	(125)	-	-	-	-	-	-	-	-	-	-	-
Net Interest Expense (Income)	-	-	-	425	1,060	1,728	2,384	3,067	3,059	3,668	4,252	4,811	5,346
PROFIT (LOSS) BEFORE INCOME TAXES	21,949	29,266	34,759	9,790	16,151	15,744	15,149	15,190	15,280	15,304	15,045	14,761	14,849
PROVISION FOR INCOME TAXES													
Current Taxes					-				-	-	-		
Deferred Taxes					-				-	-	-		
PROFIT BEFORE EXTRAORDINARY ITEMS	21,949	29,266	34,759	9,790	16,151	15,744	15,149	15,190	15,280	15,304	15,045	14,761	14,849
Extraordinary Item - Loss Carryforward			-		-								
NET PROFIT (LOSS)	21,949	29,266	34,759	9,790	16,151	15,744	15,149	15,190	15,280	15,304	15,045	14,761	14,849
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

AIRPORT NAME : VANCOUVER

AIRPORT CODE : [illegible]   VERSION NUMBER : 011   DESCRIPTION :

ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER
STATEMENT OF CASH FLOW

HISTORICAL ----> 1984	1985	1986		PROJECTED ----> 1987/88	1988	1989	1990	1991	1992	1993	1994	1995	1996/97
			SOURCES OF CASH										
51,391	66,480	78,214	Collection of Accounts Receivable	48,703	51,618	54,536	55,459	56,758	58,284	59,850	61,421	62,992	64,563
-	127	5	Decrease in Inventory	-	-	-	-	-	-	-	-	-	-
-	1	335	Proceeds on Sale of Fixed Assets	-	-	-	-	-	-	-	-	-	-
-	-	-	Proceeds on Sale of Investments	-	-	-	-	-	-	-	-	-	-
176	89	66	Increase in Employee Termination Benefits	131	329	322	316	310	304	299	293	287	282
-	-	-	Additions to Long Term Debt	17,596	10,993	18,191	10,775	5,292	15,000	15,000	15,000	15,000	15,000
-	-	-	Additions to Share Capital	-	-	-	-	-	-	-	-	-	-
6,273	1,812	(185)	Additions to Contributed Surplus	-	-	-	-	-	-	-	-	-	-
57,840	68,509	78,435	TOTAL SOURCES	66,430	62,940	73,049	66,550	62,360	73,588	75,149	76,714	78,279	79,845
			USES OF CASH										
6,121	6,667	7,598	Salaries, Wages and Benefits	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716
27,647	29,465	36,248	Payments of Accounts Payable and Holdbacks	46,041	33,322	39,075	35,082	29,779	37,011	39,450	39,936	40,424	40,910
4,186	4,673	5,004	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Interest Expense (Income)	425	1,080	1,726	2,364	2,657	3,059	3,668	4,252	4,811	5,346
55	-	-	Increase in Inventory	1	49	16	7	19	15	14	14	14	14
-	-	-	Purchase of Investments	-	-	-	-	-	-	-	-	-	-
-	-	-	Income Taxes Paid	-	-	-	-	-	-	-	-	-	-
-	-	-	Decrease in Employee Termination Benefits	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Debt Payments	507	923	1,529	1,809	2,065	2,565	3,065	3,565	4,065	4,525
-	-	-	Redemptions of Share Capital	-	-	-	-	-	-	-	-	-	-
-	-	-	Reductions of Contributed Surplus	-	-	-	-	-	-	-	-	-	-
38,009	40,805	48,924	TOTAL USES	53,710	42,090	49,062	46,058	41,246	49,366	52,913	54,483	56,030	57,551
21,771	27,704	29,511	INCREASE (DECREASE) CASH	12,720	19,950	23,987	20,492	21,114	24,222	22,236	22,231	22,249	22,294
74,310	96,681	124,385	OPENING CASH	153,896	166,616	186,566	210,553	231,045	252,159	276,381	298,617	320,848	343,097
-	-	-	INVESTED [illegible] INTEREST INCOME (EXPENSE)	-	-	-	-	-	-	-	-	-	-
96,081	124,385	153,896	CLOSING CASH	166,616	186,566	210,553	231,045	252,159	276,381	298,617	320,848	343,097	365,391

Same as capital expenditures each year

TRANSPORT CANADA

VANCOUVER
FINANCIAL RATIOS AND OPERATING STATISTICS

HISTORICAL ----->				PROJECTED ----->									
1984	1985	1986		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			FINANCIAL RATIOS										
.37	.45	.44	Net Profit Margin	.22	.30	.29	.27	.27	.26	.25	.24	.23	.23
.66	.66	.63	Operating Contribution Margin	.40	.46	.45	.45	.44	.44	.44	.43	.42	.42
.20	.26	.30	Return on Capital	.07	.12	.11	.10	.11	.10	.11	.09	.09	.09
.21	.27	.30	Return on Share Equity	.09	.15	.16	.16	.17	.19	.21	.23	.25	.29
1.22	1.43	.77	Current Ratio	.85	1.06	.87	1.02	1.14	.85	.86	.84	.82	1.25
-	-	-	Debt/Equity Ratio	.14	.23	.41	.52	.53	.80	1.03	1.31	1.65	2.18
.50	.55	.59	Asset Turnover Ratio	.31	.37	.35	.35	.37	.36	.36	.36	.36	.36
			OPERATING STATISTICS AND RATIOS										
			Passenger Traffic										
4,353,200	4,618,200	4,875,000	- Domestic	4,778,670	4,839,000	4,995,000	5,149,000	5,303,000	5,489,000	5,603,000	5,717,000	5,832,000	5,946,000
2,017,200	2,078,400	2,117,000	- International	2,241,407	3,106,000	3,237,000	3,286,000	3,415,000	3,520,000	3,666,000	3,812,000	3,958,000	4,104,000
			Aircraft Movements										
-	-	110,152	- Carrier	128,316	166,500	172,300	174,700	175,500	180,000	183,440	186,880	190,320	193,760
-	-	-	- General Aviation	125,354	147,500	150,000	151,000	155,000	158,000	161,400	164,800	168,200	171,600
222,645	210,600	125,448	- Other	-	-	-	-	-	-	-	-	-	-
3.19	3.30	3.43	Operating Cost/Passenger	3.75	3.59	3.65	3.68	3.63	3.66	3.65	3.68	3.72	3.72
37,037.21	35,431.75	35,958.97	Passenger/Person Years	-	-	-	-	-	-	-	-	-	-
8.04	9.38	10.78	Revenue/Passenger	5.79	6.23	6.21	6.13	6.09	6.06	6.05	6.04	6.02	6.02
1.24	1.31	1.38	Passenger & Cargo Fees/Passenger	1.38	1.45	1.44	1.44	1.40	1.39	1.38	1.37	1.36	1.36
1.27	1.45	1.33	Terminal Concessions/Passenger	1.33	1.51	1.51	1.51	1.51	1.51	1.52	1.53	1.54	1.55
1.06	1.10	1.20	Groundside Concessions/Passenger	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
.66	.70	.73	HQ & Regional Overhead/Passenger	-	-	-	-	-	-	-	-	-	-
1.26	1.10	1.09	Terminal Operating Costs/Passenger	-	-	-	-	-	-	-	-	-	-
22.07	20.64	20.50	Airside Costs/Total Plane Movements	25.44	21.57	21.32	21.25	21.30	21.12	20.96	20.81	20.66	20.52
1,294.45	1,151.61	1,208.21	Plane Movements/Person Year	-	-	-	-	-	-	-	-	-	-
222,645	210,600	235,600	Total Plane Movements	253,670	314,000	322,300	325,700	330,500	338,000	344,840	351,680	358,520	365,360
172	183	195	Total Person Years	-	-	-	-	-	-	-	-	-	-

30 Oct, 1987

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169   VERSION NUMBER : 021   DESCRIPTION :
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER
STATEMENT OF REVENUES AND EXPENSES

1997/98 1999/2000 2005/2006

HISTORICAL -----) 1984	1985	1986		PROJECTED -----) 1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			REVENUE (see attached schedules)										
22,309	25,692	34,982	Air Transportation Tax	-	-	-	-	-	-	-	-	-	-
10,577	11,225	13,205	Airfield Fees and Concessions	19,161	19,535	19,745	19,955	20,165	20,375	20,585	20,795	21,005	21,215
7,924	8,790	9,650	Passenger and Cargo, Fees and Rentals	13,623	13,904	14,117	14,278	14,542	14,754	14,966	15,179	15,391	15,604
8,117	9,716	9,299	Terminal Concessions	15,583	16,087	16,612	16,860	17,663	18,188	18,713	19,238	19,763	20,288
6,758	7,370	8,442	Groundside Concessions	12,08[illegible]	12,400	12,775	12,501	13,526	13,901	14,276	14,651	15,026	15,401
3,030	2,951	3,215	Industrial Rentals, Leases and Concessions	4,[illegible]1	4,450	4,567	4,670	4,800	4,917	5,034	5,151	5,268	5,385
19	-	-	Fees and Rental,Other Government Departments	-	-	-	-	-	-	-	-	-	-
59,334	65,744	78,801		6[illegible],006	66,376	67,016	68,264	70,696	72,135	73,574	75,014	76,453	77,893
			OPERATING EXPENSES (see attached schedule)										
6,101	6,667	7,592	Salaries, Wages and Benefits	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716
2,743	1,402	1,662	Materials and Supplies	2,[illegible]2	2,444	2,518	2,592	2,666	2,740	2,814	2,888	2,962	3,036
5,960	8,492	8,799	Purchased Services	12,[illegible]04	12,930	13,322	13,714	14,105	14,496	14,887	15,279	15,670	16,062
16	50	130	Other Direct Operating Costs	186	191	197	203	209	215	221	227	233	239
5,421	5,507	5,900	Depreciation	[illegible],221	9,031	9,841	10,651	11,461	12,186	12,637	13,395	14,205	14,665
-	-	-	Other Expenses	[illegible],581	3,674	3,785	3,896	4,007	4,118	4,229	4,340	4,451	4,562
-	-	-	Bad Debt Expense	-	-	-	-	-	-	-	-	-	-
20,329	22,118	24,083		33,690	34,986	36,379	37,772	39,164	40,471	41,504	42,845	44,237	45,280
39,005	43,626	54,718	CONTRIBUTION FROM OPERATIONS	31,11[illegible]	31,390	31,437	30,492	31,532	31,664	32,070	32,169	32,216	32,613
			ALLOCATED COSTS										
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
8,004	7,348	7,620	Terminal Control Costs	-	-	-	-	-	-	-	-	-	-
4,868	2,214	7,255	Grants in Lieu of Taxes	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
17,058	14,235	19,959		7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
(7)	(125)	-	Gain (Loss) on Sale of Land	-	-	-	-	-	-	-	-	-	-
-	-	-	Net Interest Expense (Income)	[illegible],310	6,867	7,352	7,811	8,245	8,654	9,039	9,398	9,732	10,041
21,940	29,266	34,759	PROFIT (LOSS) BEFORE INCOME TAXES	20,551	17,268	16,830	15,426	16,032	15,755	15,776	15,516	15,229	15,317
			PROVISION FOR INCOME TAXES										
-	-	-	Current Taxes	-	-	-	-	-	-	-	-	-	-
-	-	-	Deferred Taxes	-	-	-	-	-	-	-	-	-	-
21,940	29,266	34,759	PROFIT BEFORE EXTRAORDINARY ITEMS	20,551	17,268	16,830	15,426	16,032	15,755	15,776	15,516	15,229	15,317
-	-	-	Extraordinary Item - Loss Carryforward	-	-	-	-	-	-	-	-	-	-
21,940	29,266	34,759	NET PROFIT (LOSS)	20,551	17,268	16,830	15,426	16,032	15,755	15,776	15,516	15,229	15,317
90,457	112,397	141,663	OPENING RETAINED EARNINGS	17[illegible],422	196,973	214,241	231,071	246,497	262,529	278,284	294,060	309,576	324,805
112,397	141,663	176,422	CLOSING RETAINED EARNINGS	[illegible]	[illegible]	[illegible]	[illegible]						

REPORT ... : VANCOUVER

REPORT Code : P169 SESSION NUMBER : 021 DESCRIPTION :

ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER

STATEMENT OF CASH FLOW

HISTORICAL -----) 1984	1985	1986		PROJECTED -----) 1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			SOURCES OF CASH										
55,393	66,480	78,214	Collection of Accounts Receivable	66,497	66,133	67,593	68,194	70,319	71,912	73,351	74,791	76,230	77,670
-	127	5	Decrease in Inventory	-	-	-	-	-	-	-	-	-	-
-	1	325	Proceeds on Sale of Fixed Assets	-	-	-	-	-	-	-	-	-	-
-	-	-	Proceeds on Sale of Investments	-	-	-	-	-	-	-	-	-	-
174	89	66	Increase in Employee Termination Benefits	131	329	322	316	310	304	299	293	287	282
-	-	-	Additions to Long Term Debt	136,947	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
-	-	-	Additions to Share Capital	-	-	-	-	-	-	-	-	-	-
4,273	1,812	(183)	Additions to Contributed Surplus	-	-	-	-	-	-	-	-	-	-
59,840	68,509	78,435	TOTAL SOURCES	203,575	81,462	82,915	83,510	85,629	87,216	88,650	90,084	91,517	92,952
			USES OF CASH										
6,181	6,667	7,592	Salaries, Wages and Benefits	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716
27,647	29,465	36,248	Payments of Accounts Payable and Holdbacks	74,926	47,900	41,961	42,543	43,126	43,707	44,290	44,872	45,455	46,037
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Interest Expense (Income)	3,340	6,867	7,352	7,811	8,245	8,654	9,039	9,398	9,732	10,041
55	-	-	Increase in Inventory	113	14	17	17	17	16	17	17	16	17
-	-	-	Purchase of Investments	-	-	-	-	-	-	-	-	-	-
-	-	-	Income Taxes Paid	-	-	-	-	-	-	-	-	-	-
-	-	-	Decrease in Employee Termination Benefits	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Debt Payments	4,565	5,065	5,565	6,065	6,565	7,065	7,565	8,065	8,565	9,065
-	-	-	Redemptions of Share Capital	-	-	-	-	-	-	-	-	-	-
-	-	-	Reductions of Contributed Surplus	-	-	-	-	-	-	-	-	-	-
38,069	40,805	48,924	TOTAL USES	89,660	66,562	61,611	63,152	64,669	66,158	67,627	69,068	70,484	71,876
21,771	27,704	29,511	INCREASE (DECREASE) CASH	113,915	21,000 14,900	21,304	20,358	20,960	21,058	21,023	21,016	21,033	21,076
74,910	96,681	124,385	OPENING CASH	153,896	267,811	282,711	304,015	324,373	345,333	366,391	387,414	408,430	429,463
-	-	-	IMPUTED BANK INTEREST INCOME (EXPENSE)	-	-	-	-	-	-	-	-	-	-
96,681	124,385	153,896	CLOSING CASH	267,811	282,711	304,015	324,373	345,333	366,391	387,414	408,430	429,463	450,539

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT NAME : VANCOUVER
AIRPORT CODE : P169 VERSION NUMBER : 021 DESCRIPTION :
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER
FINANCIAL RATIOS AND OPERATING STATISTICS

HISTORICAL -----)				PROJECTED -----)									
1984	1985	1986		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			FINANCIAL RATIOS										
.37	.45	.44	Net Profit Margin	.32	.26	.25	.23	.23	.22	.21	.21	.20	.20
.66	.66	.69	Operating Contribution Margin	.48	.47	.46	.45	.45	.44	.44	.43	.42	.42
.20	.26	.30	Return on Capital	.13	.10	.10	.09	.09	.09	.09	.08	.08	.08
.21	.27	.30	Return on Share Equity	.93	.71	.84	1.03	1.59	3.28	(35.21)	(2.61)	(1.30)	(.87)
1.22	1.43	.77	Current Ratio	.54	.79	.77	.75	.74	.73	.72	.70	.69	1.35
-	-	-	Debt/Equity Ratio	5.79	5.60	7.30	10.25	16.04	35.32	(373.81)	(30.74)	(16.07)	(11.64)
.50	.55	.59	Asset Turnover Ratio	.38	.37	.37	.36	.36	.37	.37	.37	.37	.38
			OPERATING STATISTICS AND RATIOS										
			Passenger Traffic										
4,353,200	4,618,200	4,895,000	- Domestic	5,946,000	6,060,000	6,228,000	5,856,000	6,564,000	6,732,000	6,900,000	7,068,000	7,236,000	7,404,000
2,017,200	2,078,400	2,117,000	- International	4,104,000	4,250,000	4,394,000	4,538,000	4,682,000	4,826,000	4,970,000	5,114,000	5,258,000	5,402,000
			Aircraft Movements										
-	-	110,152	- Carrier	193,760	197,200	198,840	200,480	202,120	203,760	205,400	207,040	208,680	210,320
-	-	-	- General Aviation	171,600	175,000	177,000	179,000	181,000	183,000	185,000	187,000	189,000	191,000
222,645	210,600	125,448	- Other	-	-	-	-	-	-	-	-	-	-
3.19	3.30	3.43	Operating Cost/Passenger	3.35	3.39	3.42	3.63	3.48	3.50	3.50	3.52	3.54	3.54
37,037.21	35,431.75	35,956.97	Passenger/Person Years	-	-	-	-	-	-	-	-	-	-
8.84	9.30	10.78	Revenue/Passenger	6.02	6.01	5.95	6.12	5.86	5.82	5.77	5.73	5.70	5.66
1.24	1.31	1.38	Passenger & Cargo Fees/Passenger	1.36	1.35	1.33	1.37	1.27	1.28	1.26	1.25	1.23	1.22
1.27	1.45	1.33	Terminal Concessions/Passenger	1.55	1.56	1.56	1.62	1.57	1.57	.10	.04	.04	-
-	-	-	Groundside Concessions/Passenger	-	-	-	-	(.70)	-	-	-	-	-
-	-	-	HQ & Regional Overhead/Passenger	-	-	-	-	-	-	-	-	-	-
-	-	-	Terminal Operating Costs/Passenger	-	-	-	-	-	-	-	-	-	-
-	-	-	Airside Costs/Total Plane Movements	-	-	-	-	-	-	-	-	-	-
1,294.45	1,156.61	1,208.21	Plane Movement/Person Year	-	-	-	-	-	-	-	-	-	-
222,645	210,600	235,600	Total Plane Movements	365,360	372,200	375,840	379,480	383,120	386,760	390,400	394,040	397,680	401,320
172	183	195	Total Person Years	-	-	-	-	-	-	-	-	-	-

30 Oct, 1987

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT

AIRPORT NAME : VANCOUVER

AIRPORT CODE : P169   VERSION NUMBER : 0.0   DESCRIPTION :

ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER

STATEMENT OF REVENUES AND EXPENSES

HISTORICAL ----)				PROJECTED ----)									
1984	1985	1986		1987/88	1988	1989	1990	1991	1992	1993	1994	1995	1996
			REVENUE (see attached schedules)										
22,909	25,692	34,982	Air Transportation Tax	-	-	-	-	-	-	-	-	-	-
10,577	11,225	13,205	Airfield Fees and Concessions	13,205	16,420	16,911	17,112	17,274	17,645	18,039	18,413	18,787	19,161
7,324	8,790	9,658	Passenger and Cargo, Fees and Rentals	9,658	11,542	11,880	12,026	12,215	12,499	12,780	13,061	13,342	13,623
8,117	9,716	9,299	Terminal Concessions	9,299	11,969	12,449	12,647	13,150	13,567	14,071	14,575	15,079	15,583
6,758	7,370	8,442	Groundside Concessions	8,442	9,557	9,903	10,075	10,488	10,858	11,150	11,462	11,776	12,088
3,030	2,951	3,215	Industrial Rentals, Leases and Concessions	3,215	3,560	3,666	3,719	3,847	3,955	4,054	4,153	4,252	4,351
19	-	-	Fees and Rental,Other Government Departments	-	-	-	-	-	-	-	-	-	-
59,334	65,744	78,801		43,819	53,048	54,809	55,579	56,974	58,524	60,094	61,664	63,236	64,806
			OPERATING EXPENSES (see attached schedule)										
6,781	6,667	7,592	Salaries, Wages and Benefits	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716
2,743	1,402	1,662	Materials and Supplies	1,662	1,882	1,950	1,984	2,065	2,134	2,196	2,258	2,320	2,382
5,368	8,492	8,799	Purchased Services	8,799	9,961	10,321	10,501	10,932	11,297	11,623	11,950	12,277	12,604
16	50	130	Other Direct Operating Costs	130	147	152	155	161	166	171	176	181	186
5,421	5,507	5,900	Depreciation	7,769	8,735	10,708	11,589	12,050	13,585	14,846	16,414	18,034	18,954
-	-	-	Other Expenses	2,500	2,830	2,932	2,983	3,105	3,209	3,302	3,395	3,488	3,581
-	-	-	Bad Debt Expense	-	-	-	-	-	-	-	-	-	-
20,329	22,118	24,083		27,576	30,271	32,779	33,928	35,029	37,107	38,854	40,909	43,016	44,423
39,005	43,626	54,718	**CONTRIBUTION FROM OPERATIONS**	16,243	22,777	22,030	21,651	21,945	21,417	21,240	20,755	20,220	20,383
			ALLOCATED COSTS										
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
8,004	7,348	7,620	Terminal Control Costs	-	-	-	-	-	-	-	-	-	-
4,868	2,214	7,255	Grants in Lieu of Taxes	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
17,058	14,235	19,959		7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
(7)	(125)	-	Gain (Loss) on Sale of Land	-	-	-	-	-	-	-	-	-	-
-	-	-	Net Interest Expense (Income)	850	2,159	3,451	4,728	5,334	6,117	7,336	8,504	9,623	10,691
21,940	29,266	34,759	**PROFIT (LOSS) BEFORE INCOME TAXES**	8,138	13,363	11,324	9,668	9,356	8,045	6,649	4,996	3,342	2,437
			PROVISION FOR INCOME TAXES										
-	-	-	Current Taxes	-	-	-	-	-	-	-	-	-	-
-	-	-	Deferred Taxes	-	-	-	-	-	-	-	-	-	-
21,940	29,266	34,759	**PROFIT BEFORE EXTRAORDINARY ITEMS**	8,138	13,363	11,324	9,668	9,356	8,045	6,649	4,996	3,342	2,437
-	-	-	Extraordinary Item - Loss Carryforward	-	-	-	-	-	-	-	-	-	-
21,940	29,266	34,759	**NET PROFIT (LOSS)**	8,138	13,363	11,324	9,668	9,356	8,045	6,649	4,996	3,342	2,437
90,457	[illegible]	[illegible]	**OPENING RETAINED EARNINGS**	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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AIRPORT NAME : VANCOUVER AIRPORT CODE : P169 VERSION NUMBER : 020 DESCRIPTION :

ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER
STATEMENT OF CASH FLOW

	HISTORICAL -----)			PROJECTED -----)									
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
SOURCES OF CASH													
Collection of Accounts Receivable	55,393	66,480	78,214	48,763	51,618	54,536	55,459	56,758	58,284	59,850	61,421	62,992	64,563
Decrease in Inventory	-	127	5	-	-	-	-	-	-	-	-	-	-
Proceeds on Sale of Fixed Assets	-	1	335	-	-	-	-	-	-	-	-	-	-
Proceeds on Sale of Investments	-	-	-	-	-	-	-	-	-	-	-	-	-
Increase in Employee Termination Benefits	174	89	66	131	329	322	316	310	304	299	293	287	282
Additions to Long Term Debt	-	-	-	35,192	20,186	36,382	21,550	10,584	30,000	30,000	30,000	30,000	30,000
Additions to Share Capital	-	-	-	-	-	-	-	-	-	-	-	-	-
Additions to Contributed Surplus	4,273	1,812	(185)	-	-	-	-	-	-	-	-	-	-
TOTAL SOURCES	59,840	68,509	78,435	84,086	72,133	91,240	77,325	67,652	88,588	90,149	91,714	93,279	94,845
USES OF CASH													
Salaries, Wages and Benefits	6,181	6,667	7,592	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716
Payments of Accounts Payable and Holdbacks	27,647	29,465	36,248	60,117	44,917	55,646	47,340	36,168	50,069	54,450	54,936	55,424	55,910
Headquarter and Regional Overhead	4,186	4,673	5,084	-	-	-	-	-	-	-	-	-	-
Long Term Interest Expense (Income)	-	-	-	850	2,159	3,451	4,728	5,334	6,117	7,336	8,504	9,623	10,691
Increase in Inventory	55	-	-	1	49	16	7	19	15	14	14	14	14
Purchase of Investments	-	-	-	-	-	-	-	-	-	-	-	-	-
Income Taxes Paid	-	-	-	-	-	-	-	-	-	-	-	-	-
Decrease in Employee Termination Benefits	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Term Debt Payments	-	-	-	1,174	1,846	3,058	3,778	4,130	5,130	6,130	7,130	8,130	9,130
Redemptions of Share Capital	-	-	-	-	-	-	-	-	-	-	-	-	-
Reductions of Contributed Surplus	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL USES	38,069	40,805	48,924	68,858	55,687	68,887	62,569	52,367	68,047	74,646	77,300	79,907	82,461
INCREASE (DECREASE) CASH	21,771	27,704	29,511	15,228	16,446	22,353	14,756	15,285	20,541	15,503	14,414	13,372	12,384
OPENING CASH	74,910	96,681	124,385	153,896	169,124	185,570	207,923	222,679	237,964	258,505	274,008	288,422	301,794
IMPUTED BANK INTEREST INCOME (EXPENSE)	-	-	-	-	-	-	-	-	-	-	-	-	-
CLOSING CASH	96,681	124,385	153,896	169,124	185,570	207,923	222,679	237,964	258,505	274,008	288,422	301,794	314,178

TRANSPORT CANADA

VANCOUVER
FINANCIAL RATIOS AND OPERATING STATISTICS

HISTORICAL ----) 1984	1985	1986		PROJECTED ----) 1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			FINANCIAL RATIOS										
.37	.45	.44	Net Profit Margin	.19	.25	.21	.17	.16	.14	.11	.08	.05	.04
.66	.66	.69	Operating Contribution Margin	.37	.43	.40	.39	.39	.37	.35	.34	.32	.31
.20	.26	.30	Return on Capital	.06	.08	.06	.05	.05	.04	.03	.02	.01	.01
.21	.27	.30	Return on Share Equity	.08	.13	.12	.11	.11	.11	.11	.10	.08	.08
1.22	1.43	.77	Current Ratio	.57	.76	.58	.70	.78	.57	.55	.54	.52	.50
-	-	-	Debt/Equity Ratio	.30	.47	.87	1.11	1.26	1.82	2.45	3.31	4.58	6.91
.50	.55	.59	Asset Turnover Ratio	.28	.31	.28	.27	.28	.26	.25	.24	.24	.23
			OPERATING STATISTICS AND RATIOS										
			Passenger Traffic										
4,353,200	4,610,200	4,895,000	- Domestic	4,776,670	4,839,000	4,995,000	5,089,000	5,303,000	5,489,000	5,603,000	5,717,000	5,832,000	5,946,000
2,017,200	2,078,400	2,117,000	- International	2,241,407	3,106,000	3,237,000	3,286,000	3,415,000	3,520,000	3,666,000	3,812,000	3,958,000	4,104,000
			Aircraft Movements										
-	-	110,152	- Carrier	128,316	166,500	172,300	174,700	175,500	180,000	183,440	186,880	190,320	193,760
-	-	-	- General Aviation	125,354	147,500	150,000	151,000	155,000	158,000	161,400	164,800	168,200	171,600
222,645	210,600	125,448	- Other	-	-	-	-	-	-	-	-	-	-
3.19	3.30	3.43	Operating Cost/Passenger	3.93	3.81	3.98	4.05	4.02	4.12	4.19	4.29	4.39	4.42
37,037.21	35,431.75	35,958.97	Passenger/Person Years	-	-	-	-	-	-	-	-	-	-
8.04	9.38	10.78	Revenue/Passenger	5.79	6.23	6.21	6.19	6.09	6.06	6.05	6.04	6.02	6.02
1.24	1.31	1.38	Passenger & Cargo Fees/Passenger	1.38	1.45	1.44	1.44	1.40	1.39	1.38	1.37	1.36	1.36
1.27	1.45	1.33	Terminal Concessions/Passenger	1.33	1.51	1.51	1.51	1.51	1.51	1.52	1.53	1.54	1.55
1.06	1.10	1.20	Groundside Concessions/Passenger	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
.66	.70	.73	HQ & Regional Overhead/Passenger	-	-	-	-	-	-	-	-	-	-
1.26	1.10	1.09	Terminal Operating Costs/Passenger	-	-	-	-	-	-	-	-	-	-
72.07	70.64	70.50	Airside Costs/Total Plane Movements	25.44	21.57	21.32	21.25	21.30	21.12	20.96	20.81	20.66	20.52
1,294.45	1,156.61	1,208.21	Plane Movement/Person Year	-	-	-	-	-	-	-	-	-	-
222,645	210,600	235,600	Total Plane Movements	253,670	314,000	322,300	325,700	330,500	338,000	344,840	351,680	358,520	365,360
172	182	195	Total Person Years	-	-	-	-	-	-	-	-	-	-

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AIRPORT NAME : VANCOUVER AIRPORT CODE : P169 VERSION NUMBER : 022 DESCRIPTION :

ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER
STATEMENT OF REVENUES AND EXPENSES

HISTORICAL ----)				PROJECTED ----)									
1984	1985	1986		1987	~~1988~~ 1997/92	1989	1990	1991	1992	1993	1994	1995	1996
			REVENUE (see attached schedules)										
22,909	25,692	34,982	Air Transportation Tax	-	-	-	-	-	-	-	-	-	-
10,577	11,225	13,205	Airfield Fees and Concessions	19,161	19,535	19,745	19,955	20,165	20,375	20,585	20,795	21,005	21,215
7,924	8,790	9,658	Passenger and Cargo, Fees and Rentals	13,623	13,904	14,117	14,270	14,542	14,754	14,966	15,179	15,391	15,604
8,117	9,716	9,299	Terminal Concessions	15,583	16,087	16,612	16,860	17,663	18,188	18,713	19,238	19,763	20,288
6,758	7,370	8,442	Groundside Concessions	12,088	12,400	12,775	12,501	13,526	13,901	14,276	14,651	15,026	15,401
3,030	2,951	3,215	Industrial Rentals, Leases and Concessions	4,351	4,450	4,567	4,678	4,800	4,917	5,034	5,151	5,268	5,385
19	-	-	Fees and Rental, Other Government Departments		-	-	-	-	-	-	-	-	-
59,334	65,744	78,801		64,806 ✓	66,376 ✓	67,816 ✓	68,264 ✓	70,696	72,135 ✓	73,574	75,014	76,453	77,893 ✓
			OPERATING EXPENSES (see attached schedule)										
6,181	6,667	7,592	Salaries, Wages and Benefits	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716
2,743	1,402	1,662	Materials and Supplies	2,382	2,444	2,518	2,592	2,666	2,740	2,814	2,888	2,962	3,036
5,968	8,492	8,799	Purchased Services	12,604	12,930	13,322	13,714	14,105	14,496	14,887	15,279	15,670	16,062
16	50	130	Other Direct Operating Costs	186	191	197	203	209	215	221	227	233	239
5,421	5,507	5,900	Depreciation	13,181	14,801	16,421	18,041	19,661	21,196	22,457	24,025	25,645	26,565
-	-	-	Other Expenses	3,581	3,674	3,785	3,896	4,007	4,118	4,229	4,340	4,451	4,562
-	-	-	Bad Debt Expense	-	-	-	-	-	-	-	-	-	-
20,329	22,118	24,083		38,650	40,756	42,959	45,162	47,364	49,481	51,324	53,475	55,677	57,180
39,005	43,626	54,718	**CONTRIBUTION FROM OPERATIONS**	26,156	25,620	24,857	23,102	23,332	22,654	22,250	21,539	20,776	20,713
			ALLOCATED COSTS										
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
8,004	7,348	7,620	Terminal Control Costs	-	-	-	-	-	-	-	-	-	-
4,868	2,214	7,255	Grants in Lieu of Taxes	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
17,058	14,235	19,959		7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
(7)	(125)	-	Gain (Loss) on Sale of Land	-	-	-	-	-	-	-	-	-	-
-	-	-	Net Interest Expense (Income)	6,619	13,735	14,703	15,622	16,490	17,309	18,077	18,796	19,464	20,083
21,940	29,266	34,759	**PROFIT (LOSS) BEFORE INCOME TAXES**	12,282	4,630	2,899	225	(413)	(1,910)	(3,082)	(4,512)	(5,943)	(6,625)
			PROVISION FOR INCOME TAXES										
-	-	-	Current Taxes	-	-	-	-	-	-	-	-	-	-
-	-	-	Deferred Taxes	-	-	-	-	-	-	-	-	-	-
21,940	29,266	34,759	**PROFIT BEFORE EXTRAORDINARY ITEMS**	12,282	4,630	2,899	225	(413)	(1,910)	(3,082)	(4,512)	(5,943)	(6,625)
-	-	-	Extraordinary Item - Loss Carryforward	-	-	-	-	-	-	-	-	-	-
21,940	29,266	34,759	**NET PROFIT (LOSS)**	12,282	4,630	2,899	225	(413)	(1,910)	(3,082)	(4,512)	(5,943)	(6,625)
90,457	112,397	141,663	**OPENING RETAINED EARNINGS**	176,422	188,704	193,334	196,233	196,458	196,045	194,135	191,053	186,541	180,598
112,397	141,663	176,422	**CLOSING RETAINED EARNINGS**	188,704	193,334	196,233	196,458	196,045	194,135	191,053	186,541	180,598	173,973

30 Oct, 1987

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169   VERSION NUMBER : 022   DESCRIPTION :
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER
STATEMENT OF CASH FLOW

HISTORICAL ---->				PROJECTED ---->									
1984	1985	1986		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			SOURCES OF CASH										
55,399	66,480	78,214	Collection of Accounts Receivable	66,457	66,133	67,593	68,194	70,319	71,912	73,351	74,791	76,230	77,670
-	127	5	Decrease in Inventory	-	-	-	-	-	-	-	-	-	-
-	1	335	Proceeds on Sale of Fixed Assets	-	-	-	-	-	-	-	-	-	-
-	-	-	Proceeds on Sale of Investments	-	-	-	-	-	-	-	-	-	-
174	89	66	Increase in Employee Termination Benefits	131	329	322	316	310	304	299	293	287	282
-	-	-	Additions to Long Term Debt	273,934	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
-	-	-	Additions to Share Capital	-	-	-	-	-	-	-	-	-	-
4,273	1,812	(185)	Additions to Contributed Surplus	-	-	-	-	-	-	-	-	-	-
59,846	68,509	78,435	TOTAL SOURCES	340,522	96,462	97,915	98,510	100,629	102,216	103,650	105,084	106,517	107,952
			USES OF CASH										
6,181	6,667	7,592	Salaries, Wages and Benefits	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716	6,716
27,647	29,465	36,248	Payments of Accounts Payable and Holdbacks	154,072	79,791	56,961	57,543	58,126	58,707	59,290	59,872	60,455	61,037
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Interest Expense (Income)	6,619	13,735	14,703	15,622	16,490	17,309	18,077	18,796	19,464	20,083
55	-	-	Increase in Inventory	163	14	17	17	17	16	17	17	16	17
-	-	-	Purchase of Investments	-	-	-	-	-	-	-	-	-	-
-	-	-	Income Taxes Paid	-	-	-	-	-	-	-	-	-	-
-	-	-	Decrease in Employee Termination Benefits	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Debt Payments	9,130	10,130	11,130	12,130	13,130	14,130	15,130	16,130	17,130	18,130
-	-	-	Redemptions of Share Capital	-	-	-	-	-	-	-	-	-	-
-	-	-	Reductions of Contributed Surplus	-	-	-	-	-	-	-	-	-	-
38,069	40,805	48,924	TOTAL USES	176,700	110,386	89,527	92,028	94,479	96,878	99,230	101,531	103,781	105,983
21,777	27,704	29,511	INCREASE (DECREASE) CASH	163,882	13,133 (13,924)	8,388	6,482	6,150	5,338	4,420	3,553	2,736	1,969
74,904	96,681	124,385	OPENING CASH	153,836	317,718	303,794	312,182	318,664	324,814	330,152	334,572	338,125	340,861
-	-	-	IMPUTED BANK INTEREST INCOME (EXPENSE)	-	-	-	-	-	-	-	-	-	-
96,681	124,385	153,836	CLOSING CASH	317,718	303,794	312,182	318,664	324,814	330,152	334,572	338,125	340,861	342,830

AIRPORT NAME : VANCOUVER

AIRPORT CODE : [illegible] VERSION NUMBER : 022 DESCRIPTION :

ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER
FINANCIAL RATIOS AND OPERATING STATISTICS

	HISTORICAL -----> 1984	1985	1986	PROJECTED -----> 1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
FINANCIAL RATIOS													
Net Profit Margin	.37	.45	.44	.19	.07	.04	-	(.01)	(.03)	(.04)	(.06)	(.08)	(.09)
Operating Contribution Margin	.66	.66	.69	.40	.33	.37	.34	.33	.31	.30	.29	.27	.27
Return on Capital	.20	.26	.30	.06	.02	.01	-	-	(.01)	(.01)	(.01)	(.02)	(.02)
Return on Share Equity	.21	.27	.30	(.34)	(.26)	(.13)	(.01)	.01	.04	.06	.08	.09	.09
Current Ratio	1.22	1.43	.77	.24	.49	.48	.46	.46	.45	.44	.43	.42	1.04
Debt/Equity Ratio	-	-	-	(7.05)	(15.58)	(12.64)	(10.52)	(9.04)	(7.86)	(6.97)	(6.23)	(5.61)	(5.37)
Asset Turnover Ratio	.50	.55	.59	.24	.23	.23	.22	.22	.22	.22	.22	.22	.22
OPERATING STATISTICS AND RATIOS													
Passenger Traffic													
- Domestic	4,353,200	4,618,200	4,895,000	5,946,000	6,060,000	6,228,000	5,856,000	6,564,000	6,732,000	6,900,000	7,068,000	7,236,000	7,404,000
- International	2,017,200	2,078,400	2,117,000	4,104,000	4,250,000	4,394,000	4,538,000	4,682,000	4,826,000	4,970,000	5,114,000	5,258,000	5,402,000
Aircraft Movements													
- Carrier	-	-	110,152	193,760	197,200	198,840	200,480	202,120	203,760	205,400	207,040	208,680	210,320
- General Aviation	-	-	-	171,600	175,000	177,000	179,000	181,000	183,000	185,000	187,000	189,000	191,000
- Other	222,645	218,600	125,448	-	-	-	-	-	-	-	-	-	-
Operating Cost/Passenger	3.19	3.30	3.43	3.85	3.95	4.04	4.35	4.21	4.28	4.32	4.39	4.46	4.47
Passenger/Person Years	37,037.21	35,431.75	35,958.97	-	-	-	-	-	-	-	-	-	-
Revenue/Passenger	8.84	9.38	10.78	6.02	6.01	5.95	6.12	5.86	5.82	5.77	5.73	5.70	5.66
Passenger & Cargo Fees/Passenger	1.24	1.31	1.38	1.36	1.35	1.33	1.37	1.29	1.28	1.26	1.25	1.23	1.22
Terminal Concessions/Passenger	1.27	1.45	1.33	1.55	1.56	1.56	1.62	1.57	1.57	1.58	1.58	1.58	1.58
Groundside Concessions/Passenger	1.06	1.10	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
HQ & Regional Overhead/Passenger	.66	.70	.73	-	-	-	-	-	-	-	-	-	-
Terminal Operating Costs/Passenger	1.26	1.10	1.09	-	-	-	-	-	-	-	-	-	-
Airside Costs/Total Plane Movements	22.07	20.64	20.50	20.52	20.39	20.48	20.57	20.65	20.74	20.82	20.90	20.98	21.06
Plane Movement/Person Year	1,294.45	1,156.61	1,208.21	-	-	-	-	-	-	-	-	-	-
Total Plane Movements	222,645	218,600	235,600	365,360	372,200	375,840	379,480	383,120	386,760	390,400	394,040	397,680	401,320
Total Person Years	172	189	195	-	-	-	-	-	-	-	-	-	-

[illegible] 1987

[illegible]

TRANSPORT CANADA FINANCIAL PROJECTION OUTPUT REPORT

[illegible] : [illegible] VERSION NUMBER : 019 DESCRIPTION :

[illegible] THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

[illegible]

[illegible]

STATEMENT OF REVENUES AND EXPENSES

182

[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	1989	1990	1991	1992	1993	1994	1995	1996
			[illegible]										
[illegible]	[illegible]	[illegible]	Air Traffic [illegible] Tax										
10,[illegible]	[illegible]	[illegible]	Airfield [illegible] and Concessions	15,[illegible]5	16,[illegible]	16,[illegible]	17,142	17,[illegible]62	17,763	18,148	18,53[illegible]	14,[illegible]	19,[illegible]
[illegible]	[illegible]	5,650	Passenger and Cargo, Fees and Rentals	[illegible]58	11,[illegible]	11,678	11,836	12,[illegible]38	12,324	12,645	12,85[illegible]	13,169	13,[illegible]
5,[illegible]	[illegible]	[illegible]	Terminal Concessions	[illegible]	11,9[illegible]	12,74[illegible]	13,269	14,084	14,928	15,698	16,597	17,527	18,[illegible]
[illegible]	[illegible]	[illegible]	Groundside Concessions	[illegible]	8,5[illegible]	9,537	10,126	10,508	10,941	11,263	11,586	1[illegible],910	12,[illegible]
[illegible]	[illegible]	3,215	Industrial, Rentals, Leases and Concessions	3,[illegible]15	3,[illegible]	3,160	3,413	3,542	3,644	3,734	3,824	3,914	[illegible]
15			Fees and Rental, Other Government Departments										
[illegible]	[illegible]	[illegible],001		[illegible]619	5[illegible],782	54,[illegible]	55,786	57,607	58,5[illegible]	61,448	63,427	65,[illegible]38	67,[illegible]
			OPERATING EXPENSES (see attached schedule)										
[illegible]	[illegible]	[illegible]	Salaries, Wages and Benefits	[illegible]	[illegible]	6,[illegible]	6,[illegible]	6,[illegible]	6,[illegible]	6,[illegible]	6,[illegible]	[illegible]	6,[illegible]
[illegible]	[illegible]	1,662	Materials and Supplies	1,[illegible]	1,[illegible]	1,[illegible]	1,813	1,895	1,[illegible]	2,017	2,075	2,133	2,[illegible]
[illegible]	[illegible]	8,[illegible]	Purchased Services	[illegible]	[illegible]	[illegible]	9,603	10,036	10,3[illegible]	10,662	10,906	11,[illegible]	11,[illegible]
16	[illegible]	135	Other Direct Operating Costs	13[illegible]	1[illegible]	140	143	149	15[illegible]	159	164	169	174
[illegible]	[illegible]	[illegible]	Depreciation	[illegible]	[illegible]	8,411	9,052	9,[illegible]	10,[illegible]	10,459	11,217	1[illegible]	1[illegible]
			Other Expenses	[illegible]	[illegible]	2,677	2,720	2,851	2,[illegible]	3,035	3.122	3,209	3,29[illegible]
			[illegible]										
[illegible]	[illegible]	26,003		[illegible],349	[illegible],771	28,491	29,400	30,275	31,507	32,413	33,427	34,054	35,010
13,005	[illegible]	56,710	CONTRIBUTION FROM OPERATIONS	[illegible]	25,011	26,191	26,386	27,132	27,931	29,035	29,000	30,544	31,669
			ALLOCATED COSTS										
[illegible]	[illegible]	[illegible]	Headquarters and Regional Overhead										
6,[illegible]	[illegible]	[illegible]	Terminal Control Costs										
[illegible]	[illegible]	[illegible]	Grants in Lieu of Taxes	[illegible]	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	[illegible]
[illegible]	[illegible]	1[illegible],55[illegible]		[illegible]	[illegible]	7,255	7,255	7,255	7,255	7,255	7,255	[illegible]	[illegible]
([illegible])	(125)		Gain (Loss) on Sale of Land										
			Net Interest Expense (Income)	[illegible]	[illegible]	2,[illegible]	[illegible]	3,3[illegible]	3,[illegible]	[illegible]	4,085	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	PROFIT (LOSS) BEFORE INCOME TAXES	[illegible]	16,[illegible]	16,8[illegible]	16,179	16,[illegible]	1[illegible],017	[illegible]	17,180	17,[illegible]	18,[illegible]
			PROVISION FOR INCOME TAXES										
			Current Tax										
			Deferred Tax										
[illegible]	[illegible]	[illegible]	PROFIT BEFORE EXTRAORDINARY ITEMS	[illegible]	16,555	16,8[illegible]	16,179	16,[illegible]	17,017	17,[illegible]75	17,680	17,[illegible]	18,5[illegible]
			Extraordinary [illegible]										
[illegible]	[illegible]	[illegible]	NET PROFIT (LOSS)	[illegible]	16,[illegible]	16,8[illegible]	16,179	16,[illegible]	1[illegible],017	17,[illegible]	17,180	17,[illegible]	18,[illegible]
[illegible]	[illegible]	[illegible]	RETAINED EARNINGS (CLOSING)	[illegible]	[illegible]	[illegible]	17,[illegible]	[illegible]	[illegible]	[illegible]	47,[illegible]	[illegible]	[illegible]

AIRPORT NAME : VANCOUVER

AIRPORT CODE : P1C9 VERSION NUMBER : V19 DESCRIPTION :

ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER
STATEMENT OF CASH FLOW

HISTORICAL ----) 1984	1985	1986		PROJECTED ----) 1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			SOURCES OF CASH										
55,393	66,480	78,214	Collection of Accounts Receivable	48,763	51,393	54,387	55,615	57,325	59,206	61,147	63,120	65,126	67,163
-	127	5	Decrease in Inventory	-	-	4	-	-	-	-	-	-	-
-	1	335	Proceeds on Sale of Fixed Assets	-	-	-	-	-	-	-	-	-	-
-	-	-	Proceeds on Sale of Investments	-	-	-	-	-	-	-	-	-	-
174	89	66	Increase in Employee Termination Benefits	131	311	286	282	277	272	266	261	256	252
-	-	-	Additions to Long Term Debt	17,596	15,033	23,191	15,775	5,292	15,000	15,000	15,000	15,000	15,000
-	-	-	Additions to Share Capital	-	-	-	-	-	-	-	-	-	-
4,273	1,812	(185)	Additions to Contributed Surplus	-	-	-	-	-	-	-	-	-	-
59,840	68,509	78,435	TOTAL SOURCES	66,490	66,737	77,870	71,672	62,894	74,478	76,413	78,381	80,382	82,415
			USES OF CASH										
6,181	6,667	7,592	Salaries, Wages and Benefits	6,716	6,388	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061
27,647	29,465	36,248	Payments of Accounts Payable and Holdbacks	46,041	36,730	42,875	38,747	29,443	35,650	38,057	38,513	39,970	39,426
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Interest Expense (Income)	425	1,201	2,084	2,952	3,356	3,721	4,305	4,865	5,377	5,909
55	-	-	Increase in Inventory	1	30	-	8	18	15	13	13	13	12
-	-	-	Purchase of Investments	-	-	-	-	-	-	-	-	-	-
-	-	-	Income Taxes Paid	-	-	-	-	-	-	-	-	-	-
-	-	-	Decrease in Employee Termination Benefits	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Debt Payments	587	1,090	1,863	2,309	2,565	3,065	3,565	4,065	4,565	5,065
-	-	-	Redemptions of Share Capital	-	-	-	-	-	-	-	-	-	-
-	-	-	Reductions of Contributed Surplus	-	-	-	-	-	-	-	-	-	-
38,069	40,805	48,924	TOTAL USES	53,770	45,439	52,883	50,157	41,443	48,512	52,001	53,517	55,008	56,473
21,771	27,704	29,511	INCREASE (DECREASE) CASH	12,720	21,298	24,987	21,515	21,451	25,966	24,412	24,864	25,374	25,942
74,910	96,681	124,385	OPENING CASH	153,896	166,616	187,914	212,901	234,416	255,867	281,833	306,245	331,109	356,483
-	-	-	IMPUTED BANK INTEREST INCOME (EXPENSE)	-	-	-	-	-	-	-	-	-	-
96,681	124,385	153,896	CLOSING CASH	166,616	187,914	212,901	234,416	255,867	281,833	306,245	331,109	356,483	382,425

TRANSPORT CANADA

VANCOUVER
FINANCIAL RATIOS AND OPERATING STATISTICS

HISTORICAL 1984	1985	1986		PROJECTED 1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			FINANCIAL RATIOS										
.37	.45	.44	Net Profit Margin	[illegible]	.31	.31	.29	.23	.29	.28	.28	.27	.27
.66	.66	.63	Operating Contribution Margin	.40	.47	.48	.47	.47	.47	.47	.47	.47	.47
.20	.16	.30	Return on Capital	.07	.12	.11	.10	.11	.11	.10	.10	.10	.10
.21	.27	.30	Return on Share Equity	.09	.15	.17	.17	.19	.21	.24	.27	.30	.36
1.22	1.43	.77	Current Ratio	.83	.94	.79	.90	1.08	.87	.85	.84	.83	1.35
-	-	-	Debt/Equity Ratio	.11	.27	.50	.67	.73	.95	1.19	1.48	1.83	2.73
.50	.55	.53	Asset Turnover Ratio	.31	.35	.33	.32	.34	.34	.34	.35	.35	.36
			OPERATING STATISTICS AND RATIOS										
			Passenger Traffic										
4,353,600	4,418,200	4,095,000	- Domestic	4,778,630	4,833,000	5,010,660	5,214,530	5,354,965	5,542,343	5,659,742	5,777,132	5,895,665	6,013,158
2,017,600	2,020,400	2,117,000	- International	2,241,607	3,106,000	3,250,100	3,304,218	3,446,395	3,555,005	3,705,446	3,855,927	4,006,563	4,157,310
			Aircraft Movements										
-	-	110,152	- Carrier	129,318	168,500	172,880	175,529	176,412	181,026	184,555	188,085	191,616	195,149
-	-	-	- General Aviation	125,354	147,500	150,250	151,352	155,762	158,017	162,324	165,811	169,301	172,791
222,145	210,600	165,448	- Other	-	-	-	(1)	5	5	4	5	5	6
3.19	3.30	3.43	Operating Cost/Passenger	3.75	3.50	3.45	3.49	3.44	3.46	3.46	3.49	3.52	3.52
35,037.21	35,431.75	35,958.97	Passenger/Person Years	-	-	-	-	-	-	-	-	-	-
8.04	9.38	10.78	Revenue/Passenger	5.73	6.21	6.21	[illegible]	6.15	6.14	6.18	6.19	6.21	6.24
1.24	1.31	1.30	Passenger & Cargo Fees/Passenger	1.30	1.40	1.41	1.41	1.37	1.35	1.35	1.34	1.33	1.32
1.27	1.45	1.33	Terminal Concessions/Passenger	1.13	1.51	1.54	1.57	1.60	1.63	1.68	1.72	1.77	1.82
1.08	1.10	1.20	Groundside Concessions/Passenger	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
.66	.70	.73	HQ & Regional Overhead/Passenger	-	-	-	-	-	-	-	-	-	-
1.26	1.14	1.49	Terminal Operating Costs/Passenger	-	-	-	-	-	-	-	-	-	-
22.07	20.64	20.50	Airside Costs/Total Plane Movements	25.44	20.04	19.85	19.77	19.82	19.64	19.49	19.34	19.20	19.06
1,234.85	1,124.44	1,408.21	Plane Movement/Person Year	-	-	-	-	-	-	-	-	-	-
222,145	210,600	275,600	Total Plane Movements	254,672	316,000	323,130	326,882	332,179	339,048	346,883	353,901	360,922	367,946
182	189	195	Total Person Years	-	-	-	-	-	-	-	-	-	-

30 Oct, 1987

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT

AIRPORT NAME : VANCOUVER
AIRPORT CODE : P169 VERSION NUMBER : 023 DESCRIPTION :
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER
STATEMENT OF REVENUES AND EXPENSES

HISTORICAL ----->				PROJECTED ----->									
1984	1985	1986		1987	~~1988~~ 1997/98	1989	1990	1991	1992	1993	1994	1995	1996
			REVENUE (see attached schedules)										
22,909	25,692	34,982	Air Transportation Tax	-	-	-	-	-	-	-	-	-	-
10,577	11,225	13,205	Airfield Fees and Concessions	19,303	19,688	19,904	20,120	20,336	20,552	20,768	20,984	21,201	21,417
7,924	8,790	9,658	Passenger and Cargo, Fees and Rentals	13,452	13,735	13,948	14,161	14,374	14,587	14,800	15,013	15,226	15,439
8,117	9,716	9,299	Terminal Concessions	18,487	19,472	20,522	21,608	22,730	23,889	25,083	26,320	27,594	28,910
6,758	7,370	8,442	Groundside Concessions	12,233	12,556	12,944	13,332	13,720	14,109	14,498	14,887	15,276	15,665
3,030	2,951	3,215	Industrial Rentals, Leases and Concessions	4,004	4,094	4,204	4,314	4,424	4,534	4,644	4,754	4,864	4,974
19	-	-	Fees and Rental,Other Government Departments	-	-	-	-	-	-	-	-	-	-
59,334	65,744	78,801		67,479	69,545	71,522	73,535	75,584	77,671	79,795	81,958	84,161	86,405
			OPERATING EXPENSES (see attached schedule)										
6,181	6,667	7,592	Salaries, Wages and Benefits	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061
2,743	1,402	1,662	Materials and Supplies	2,191	2,249	2,318	2,388	2,457	2,527	2,596	2,666	2,736	2,806
5,968	8,492	8,799	Purchased Services	11,601	11,907	12,275	12,643	13,011	13,379	13,747	14,115	14,483	14,852
16	50	130	Other Direct Operating Costs	174	179	185	191	197	203	209	215	221	227
5,421	5,507	5,900	Depreciation	8,628	9,438	10,248	11,058	11,868	12,593	13,044	13,802	14,612	15,072
-	-	-	Other Expenses	3,296	3,383	3,488	3,593	3,698	3,803	3,908	4,013	4,118	4,223
-	-	-	Bad Debt Expense	-	-	-	-	-	-	-	-	-	-
20,329	22,118	24,083		31,951	33,217	34,575	35,934	37,292	38,566	39,565	40,872	42,231	43,241
39,005	43,626	54,718	CONTRIBUTION FROM OPERATIONS	35,528	36,328	36,947	37,601	38,292	39,105	40,230	41,086	41,930	43,164
			ALLOCATED COSTS										
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
8,004	7,348	7,620	Terminal Control Costs	-	-	-	-	-	-	-	-	-	-
4,868	2,214	7,255	Grants in Lieu of Taxes	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
17,058	14,235	19,959		7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
(7)	(125)	-	Gain (Loss) on Sale of Land	-	-	-	-	-	-	-	-	-	-
-	-	-	Net Interest Expense (Income)	3,672	7,555	7,964	8,323	8,633	8,892	9,101	9,260	9,370	9,429
21,940	29,266	34,759	PROFIT (LOSS) BEFORE INCOME TAXES	24,601	21,518	21,728	22,023	22,404	22,958	23,874	24,571	25,305	26,480
			PROVISION FOR INCOME TAXES										
-	-	-	Current Taxes	-	-	-	-	-	-	-	-	-	-
-	-	-	Deferred Taxes	-	-	-	-	-	-	-	-	-	-
21,940	29,266	34,759	PROFIT BEFORE EXTRAORDINARY ITEMS	24,601	21,518	21,728	22,023	22,404	22,958	23,874	24,571	25,305	26,480
-	-	-	Extraordinary Item - Loss Carryforward	-	-	-	-	-	-	-	-	-	-
21,940	29,266	34,759	NET PROFIT (LOSS)	24,601	21,518	21,728	22,023	22,404	22,958	23,874	24,571	25,305	26,480
90,457	112,397	141,663	OPENING RETAINED EARNINGS	176,422	201,023	222,541	244,269	266,292	288,696	311,654	335,528	360,099	385,404
112,397	141,663	176,422	CLOSING RETAINED EARNINGS	201,023	222,541	244,269	266,292	288,696	311,654	335,528	360,099	385,404	411,884

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AIRPORT NAME : VANCOUVER   AIRPORT CODE : PIC9   VERSION NUMBER : 023   DESCRIPTION :

ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER
STATEMENT OF CASH FLOW

HISTORICAL -----)				PROJECTED -----)									
1984	1985	1986		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			SOURCES OF CASH										
55,393	66,480	78,214	Collection of Accounts Receivable	68,756	69,225	71,215	73,223	75,266	77,348	79,466	81,623	83,819	86,057
-	127	5	Decrease in Inventory	-	-	-	-	-	-	-	-	-	-
-	1	335	Proceeds on Sale of Fixed Assets	-	-	-	-	-	-	-	-	-	-
-	-	-	Proceeds on Sale of Investments	-	-	-	-	-	-	-	-	-	-
174	89	66	Increase in Employee Termination Benefits	96	294	289	283	278	272	267	262	257	252
-	-	-	Additions to Long Term Debt	151,947	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
-	-	-	Additions to Share Capital	-	-	-	-	-	-	-	-	-	-
4,273	1,812	(185)	Additions to Contributed Surplus	-	-	-	-	-	-	-	-	-	-
59,840	68,509	78,435	TOTAL SOURCES	220,799	84,519	86,504	88,506	90,544	92,620	94,733	96,885	99,076	101,309
			USES OF CASH										
6,181	6,667	7,592	Salaries, Wages and Benefits	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061
27,647	29,465	36,248	Payments of Accounts Payable and Holdbacks	81,785	48,703	40,412	40,960	41,508	42,058	42,605	43,154	43,703	44,253
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Interest Expense (Income)	3,672	7,355	7,964	8,323	8,633	8,892	9,101	9,260	9,370	9,429
55	-	-	Increase in Inventory	120	13	16	16	15	16	16	16	15	16
-	-	-	Purchase of Investments	-	-	-	-	-	-	-	-	-	-
-	-	-	Income Taxes Paid	-	-	-	-	-	-	-	-	-	-
-	-	-	Decrease in Employee Termination Benefits	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Debt Payments	5,065	6,565	7,065	8,565	9,065	10,565	11,065	12,565	13,065	14,565
-	-	-	Redemptions of Share Capital	-	-	-	-	-	-	-	-	-	-
-	-	-	Reductions of Contributed Surplus	-	-	-	-	-	-	-	-	-	-
38,069	40,805	48,924	TOTAL USES	96,703	68,697	61,518	63,925	65,282	67,592	68,848	71,056	72,214	74,324
21,771	27,704	29,511	INCREASE (DECREASE) CASH	124,096	24,500 15,822	24,986	24,581	25,262	25,028	25,885	25,829	26,862	26,985
74,910	96,681	124,385	OPENING CASH	153,896	277,992	293,814	318,800	343,381	368,643	393,671	419,556	445,385	472,247
-	-	-	IMPUTED BANK INTEREST INCOME (EXPENSE)	-	-	-	-	-	-	-	-	-	-
96,681	124,385	153,896	CLOSING CASH	277,992	293,814	318,800	343,381	368,643	393,671	419,556	445,385	472,247	499,232

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30 Oct, 1987
                                  AIRPORT NAME : VANCOUVER                 TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT                                    PAGE # 5
                                                                           AIRPORT CODE : P169    VERSION NUMBER : 023    DESCRIPTION :
                                                                  ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

                                                                                        TRANSPORT CANADA
                                                                                        ----------------
                                                                                           VANCOUVER
                                                                              FINANCIAL RATIOS AND OPERATING STATISTICS

          HISTORICAL  -----)                                                  PROJECTED  -----)
          1984         1985        1986                                       1987        1988        1989        1990        1991        1992        1993        1994        1995        1996
          ----         ----        ----                                       ----        ----        ----        ----        ----        ----        ----        ----        ----        ----
                                          FINANCIAL RATIOS
                                          ----------------

           .37          .45         .44   Net Profit Margin                    .36         .31         .30         .30         .30         .30         .30         .30         .30         .31
           .66          .66         .69   Operating Contribution Margin        .53         .52         .52         .51         .51         .50         .50         .50         .50         .50
           .20          .26         .30   Return on Capital                    .15         .12         .12         .12         .12         .12         .13         .13         .13         .13
           .21          .27         .30   Return on Share Equity              1.54         .99        1.18        1.39        1.73        2.11        2.69        3.22        4.17        4.76
          1.22         1.43         .77   Current Ratio                        .48         .76         .70         .70         .66         .65         .62         .62         .59        1.54
             -            -           -   Debt/Equity Ratio                   8.88        6.85        8.42       10.16       12.74       15.52       19.31       22.75       28.67       33.97
           .50          .55         .59   Asset Turnover Ratio                 .37         .37         .37         .37         .37         .38         .38         .39         .40         .41

                                          OPERATING STATISTICS AND RATIOS
                                          -------------------------------

                                          Passenger Traffic
     4,353,200    4,610,200   4,875,000    - Domestic                    6,013,158   6,130,888   6,304,215   6,477,634   6,651,142   6,824,738   6,998,419   7,172,182   7,346,028   7,519,953
     2,017,200    2,078,400   2,117,000    - International               4,157,310   4,308,165   4,457,055   4,606,043   4,755,125   4,904,299   5,053,562   5,202,912   5,352,345   5,501,861
                                          Aircraft Movements
             -            -     110,152    - Carrier                       195,143     198,683     200,369     202,054     203,741     205,427     207,114     208,801     210,489     212,177
             -            -           -    - General Aviation              172,731     176,203     178,338     180,394     182,450     184,506     186,563     188,620     190,678     192,736
       222,645      218,600     125,448    - Other                               6           6           5           5           4           5           4           4           3           2
          3.19         3.30        3.43   Operating Cost/Passenger            3.14        3.18        3.21        3.24        3.27        3.29        3.28        3.30        3.31        3.32
     37,037.21    35,431.75   35,950.97   Passenger/Person Years                 -           -           -           -           -           -           -           -           -           -
          8.84         9.38       10.78   Revenue/Passenger                   6.24        6.27        6.26        6.25        6.24        6.24        6.24        6.24        6.24        6.25
          1.24         1.31        1.38   Passenger & Cargo Fees/Passenger    1.32        1.32        1.30        1.28        1.26        1.24        1.23        1.21        1.20        1.19
          1.27         1.45        1.33   Terminal Concessions/Passenger      1.82        1.87        1.91        1.95        1.99        2.04        2.08        2.13        2.17        2.22
          1.06         1.10        1.20   Groundside Concessions/Passenger    1.20        1.20        1.20        1.20        1.20        1.20        1.20        1.20        1.20        1.20
           .66          .70         .73   HQ & Regional Overhead/Passenger       -           -           -           -           -           -           -           -           -           -
          1.26         1.10        1.09   Terminal Operating Costs/Passenger     -           -           -           -           -           -           -           -           -           -
         72.07        70.64       70.50   Airside Costs/Total Plane Movements 19.07       18.94       19.02       19.10       19.18       19.26       19.33       19.41       19.48       19.55
      1,274.45     1,156.61    1,208.21   Plane Movement/Person Year             -           -           -           -           -           -           -           -           -           -
       222,645      218,600     235,600   Total Plane Movements            367,946     374,972     378,712     382,453     386,175     389,938     393,681     397,425     401,170     404,915
           172          189         195   Total Person Years                     -           -           -           -           -           -           -           -           -           -
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30 Oct, 1987

AIRPORT NAME : VANCOUVER

TRANSPORT CANADA FINANCIAL PROJECTION - OUTPUT REPORT
AIRPORT CODE : P169 VERSION NUMBER : 624 DESCRIPTION :
ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

Spec Case 2 - Plan 2

TRANSPORT CANADA

VANCOUVER
STATEMENT OF REVENUES AND EXPENSES

197/92

HISTORICAL -----) 1984	1985	1986		PROJECTED -----) 1987	~~1988~~	1989	1990	1991	1992	1993	1994	1995	1996
			REVENUE (see attached schedules)										
22,903	25,692	34,502	Air Transportation Tax	19,307	19,688	19,904	20,120	20,336	20,552	20,768	20,984	21,201	21,417
10,577	11,225	13,205	Airfield Fees and Concessions	13,468	13,735	13,948	14,161	14,374	14,587	14,800	15,013	15,226	15,439
7,924	8,790	9,658	Passenger and Cargo, Fees and Rentals	18,467	19,479	20,530	21,616	22,730	23,898	25,094	26,330	27,604	28,920
8,117	9,716	9,299	Terminal Concessions	12,233	12,556	12,944	13,332	13,728	14,107	14,498	14,887	15,276	15,665
6,758	7,370	8,442	Groundside Concessions	4,004	4,094	4,204	4,314	4,424	4,536	4,644	4,754	4,864	4,974
3,030	2,951	3,215	Industrial Rentals, Leases and Concessions	-	-	-	-	-	-	-	-	-	-
19	-	-	Fees and Rental,Other Government Departments										
59,334	65,744	78,801		67,479	69,552	71,530	73,543	75,592	77,680	79,804	81,968	84,171	86,415
			OPERATING EXPENSES (see attached schedule)										
6,181	6,667	7,592	Salaries, Wages and Benefits	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061
2,743	1,402	1,662	Materials and Supplies	2,191	2,249	2,318	2,388	2,457	2,527	2,596	2,666	2,736	2,806
5,968	8,492	8,799	Purchased Services	11,601	11,907	12,275	12,643	13,011	13,379	13,747	14,115	14,483	14,852
16	50	130	Other Direct Operating Costs	174	179	185	191	197	203	209	215	221	227
5,421	5,507	5,900	Depreciation	8,628	11,438	14,248	16,058	16,868	17,593	18,044	18,002	19,612	20,072
-	-	-	Other Expenses	3,296	3,383	3,488	3,593	3,698	3,803	3,908	4,013	4,118	4,223
-	-	-	Bad Debt Expense	-	-	-	-	-	-	-	-	-	-
20,329	22,118	24,083		31,951	35,217	38,575	40,934	42,292	43,566	44,565	45,072	47,231	48,241
39,005	43,626	54,718	CONTRIBUTION FROM OPERATIONS	35,528	34,335	32,955	32,609	33,100	34,114	35,239	36,096	36,940	38,174
			ALLOCATED COSTS										
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
8,804	7,348	7,620	Terminal Control Costs	-	-	-	-	-	-	-	-	-	-
4,868	2,214	7,255	Grants in Lieu of Taxes	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
17,858	14,235	19,959		7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255
(7)	(125)	-	Gain (Loss) on Sale of Land	-	-	-	-	-	-	-	-	-	-
	-	-	Net Interest Expense (Income)	3,672	8,788	11,623	13,744	14,370	14,746	14,897	15,023	15,124	15,200
21,140	29,266	34,759	PROFIT (LOSS) BEFORE INCOME TAXES	24,601	18,292	14,077	11,610	11,475	12,113	13,087	13,818	14,561	15,719
			PROVISION FOR INCOME TAXES										
		-	Current Taxes	-	-	-	-	-	-	-	-	-	-
		-	Deferred Taxes	-	-	-	-	-	-	-	-	-	-
21,140	29,266	34,759	PROFIT BEFORE EXTRAORDINARY ITEMS	24,601	18,292	14,077	11,610	11,475	12,113	13,087	13,818	14,561	15,719
-	-	-	Extraordinary Item - Loss Carryforward	-	-	-	-	-	-	-	-	-	-
21,140	29,266	34,759	NET PROFIT (LOSS)	24,601	18,292	14,077	11,610	11,475	12,113	13,087	13,818	14,561	15,719
91,257	112,397	141,663	OPENING RETAINED EARNINGS	176,422	201,023	219,315	233,392	245,002	256,477	268,590	281,677	295,495	310,056
112,397	141,663	176,422	CLOSING RETAINED EARNINGS	201,023	219,315	233,392	245,002	256,477	268,590	281,677	295,495	310,056	325,775

Oct,

[illegible]   MARCH   CTCOM   / REFQ.

AIRPORT NAME : VANCOUVER   AIRPORT CODE : [illegible]   VERSION NUMBER : 024   DESCRIPTION :

ALL FIGURES ARE IN THOUSANDS OF CANADIAN DOLLARS UNLESS STATED OTHERWISE

TRANSPORT CANADA

VANCOUVER
STATEMENT OF CASH FLOW

HISTORICAL -----)				PROJECTED -----)									
1984	1985	1986		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			SOURCES OF CASH										
55,393	66,480	78,214	Collection of Accounts Receivable	68,756	69,230	71,224	73,231	75,274	77,357	79,474	81,633	83,829	86,068
-	127	5	Decrease in Inventory	-	-	-	-	-	-	-	-	-	-
-	1	335	Proceeds on Sale of Fixed Assets	-	-	-	-	-	-	-	-	-	-
-	-	-	Proceeds on Sale of Investments	-	-	-	-	-	-	-	-	-	-
174	89	66	Increase in Employee Termination Benefits	96	294	289	283	278	272	267	262	257	252
-	-	-	Additions to Long Term Debt	151,947	65,000	65,000	40,000	15,000	15,000	15,000	15,000	15,000	15,000
-	-	-	Additions to Share Capital	-	-	-	-	-	-	-	-	-	-
4,273	1,812	(185)	Additions to Contributed Surplus	-	-	-	-	-	-	-	-	-	-
59,840	68,509	78,435	TOTAL SOURCES	220,799	134,524	136,513	113,514	90,552	92,629	94,741	96,895	99,086	101,320
			USES OF CASH										
6,181	6,667	7,592	Salaries, Wages and Benefits	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061	6,061
27,647	29,465	36,248	Payments of Accounts Payable and Holdbacks	81,785	88,503	90,412	70,960	46,508	42,058	42,605	43,154	43,703	44,253
4,186	4,673	5,084	Headquarter and Regional Overhead	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Interest Expense (Income)	3,672	8,788	11,623	13,744	14,570	14,746	14,897	15,023	15,124	15,200
55	-	-	Increase in Inventory	120	13	16	16	15	16	16	16	15	16
-	-	-	Purchase of Investments	-	-	-	-	-	-	-	-	-	-
-	-	-	Income Taxes Paid	-	-	-	-	-	-	-	-	-	-
-	-	-	Decrease in Employee Termination Benefits	-	-	-	-	-	-	-	-	-	-
-	-	-	Long Term Debt Payments	5,065	7,232	9,398	10,732	11,232	11,732	12,232	12,732	13,232	13,732
-	-	-	Redemptions of Share Capital	-	-	-	-	-	-	-	-	-	-
-	-	-	Reductions of Contributed Surplus	-	-	-	-	-	-	-	-	-	-
38,069	40,805	48,924	TOTAL USES	96,703	110,597	117,510	101,513	78,386	74,613	75,811	76,986	78,135	79,262
21,771	27,704	29,511	INCREASE (DECREASE) CASH	124,096	~~23,927~~ 25,000	19,003	12,001	12,166	18,016	18,930	19,909	20,951	22,058
74,910	96,681	124,385	OPENING CASH	153,896	277,992	301,919	320,922	332,923	345,089	363,105	382,035	401,944	422,895
-	-	-	INVESTED BANK INTEREST INCOME (EXPENSE)	-	-	-	-	-	-	-	-	-	-
96,681	124,385	153,896	CLOSING CASH	277,992	301,919	320,922	332,923	345,089	363,105	382,035	401,944	422,895	444,953

TRANSPORT CANADA

VANCOUVER
FINANCIAL RATIOS AND OPERATING STATISTICS

HISTORICAL -----> 1984	1985	1986		PROJECTED -----> 1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
			FINANCIAL RATIOS										
.37	.45	.44	Net Profit Margin	.36	.26	.20	.16	.15	.16	.16	.17	.17	.18
.66	.66	.69	Operating Contribution Margin	.53	.49	.46	.44	.44	.44	.44	.44	.44	.44
.20	.26	.30	Return on Capital	.16	.09	.05	.04	.04	.04	.05	.05	.05	.05
.21	.27	.30	Return on Share Equity	1.54	1.78	2.62	2.33	2.67	(7.53)	(1.76)	(1.02)	(.73)	(.60)
1.22	1.43	.77	Current Ratio	.47	.42	.41	.50	.62	.62	.62	.61	.61	1.54
-	-	-	Debt/Equity Ratio	8.76	10.95	46.4[illegible]	55.83	65.57	(176.71)	(38.46)	(21.29)	(14.53)	(11.60)
.50	.55	.59	Asset Turnover Ratio	.37	.29	.25	.23	.24	.25	.26	.27	.28	.29
			OPERATING STATISTICS AND RATIOS										
			Passenger Traffic										
4,353,200	4,610,200	4,835,000	- Domestic	6,013,150	6,130,888	6,304,215	6,477,634	6,651,142	6,824,738	6,998,419	7,172,182	7,346,028	7,519,953
2,417,260	2,078,400	2,117,000	- International	4,157,310	4,300,165	4,457,855	4,606,043	4,755,125	4,904,299	5,053,562	5,202,912	5,352,345	5,501,861
			Aircraft Movements										
-	-	110,152	- Carrier	195,149	198,683	200,369	202,054	203,741	205,427	207,114	208,801	210,489	212,177
-	-	-	- General Aviation	172,731	176,283	178,338	180,391	182,450	184,506	186,563	188,620	190,678	192,736
222,645	210,600	125,448	- Other	6	6	5	5	4	5	4	4	3	2
3.19	3.30	3.43	Operating Cost/Passenger	3.14	3.37	3.58	3.69	3.71	3.71	3.70	3.71	3.72	3.70
37,037.21	35,431.75	35,950.97	Passenger/Person Years	-	-	-	-	-	-	-	-	-	-
8.84	9.30	10.78	Revenue/Passenger	6.24	6.27	6.26	6.25	6.24	6.24	6.24	6.24	6.25	6.25
1.24	1.31	1.38	Passenger & Cargo Fees/Passenger	1.32	1.32	1.30	1.28	1.26	1.24	1.23	1.21	1.20	1.19
1.27	1.45	1.33	Terminal Concessions/Passenger	1.82	1.87	1.91	1.95	1.99	2.04	2.08	2.13	2.17	2.22
1.06	1.10	1.20	Groundside Concessions/Passenger	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
.66	.70	.73	HQ & Regional Overhead/Passenger	-	-	-	-	-	-	-	-	-	-
1.26	1.10	1.09	Terminal Operating Costs/Passenger	-	-	-	-	-	-	-	-	-	-
72.07	70.64	70.50	Airside Costs/Total Plane Movements	19.07	18.94	19.02	19.10	19.18	19.26	19.33	19.41	19.48	19.55
1,274.15	1,154.61	1,208.21	Plane Movement/Person Year	-	-	-	-	-	-	-	-	-	-
222,645	210,600	235,600	Total Plane Movements	367,946	374,922	378,712	382,453	386,195	389,938	393,681	397,425	401,170	404,915
172	183	195	Total Person Years	-	-	-	-	-	-	-	-	-	-

Appendix 7-8

EXHIBIT 1

DESCRIPTION OF LOWER MAINLAND REGIONAL AIRPORTS

	Abbotsford	Pitt Meadows	Langley	Boundary Bay
Number of Hectares	538	287	50	520
Runways				
. Number	2	3	2	3
. Longest	8,000 feet	4,300 feet	2,500 feet	2,500 feet
Type of airport	. Local commercial . VIA's alternative site	. Local commercial	. General aviation	
Owner	. Transport Canada	. Transport Canada	. Township of Langley	. Transport Canada
Operator	. Transport Canada	. Transport Canada	. As above but Transport Canada controls traffic	. 48 year lease by Aztec Aviation
Landing capabilities	. Jet	. Under 12,500 lbs aircraft	. Twin otter size aircraft	
Traffic Statistics				
Air Carrier				
1981	883	-	-	-
1985	485	-	-	-
General aviation				
1981	71,515	69,362	60,460	n/a
1985	45,005	34,184	31,822	41,840
Training				
1981	104,753	181,888	113,557	n/a
1985	54,442	45,096	69,442	82,464
System capacity	250,000	310,000	210,000	310,000
Financial (1986)				
Total assets	4,552	3,437	n/a	n/a
Total liabilities	256	448	n/a	n/a
Shareholders' equity	4,296	2,988	n/a	n/a
Sources of funds	340	161	n/a	n/a
Uses of funds	1,092	1,898	n/a	n/a
Increase (decrease) in cash	(752)	(1,737)	n/a	n/a
Total revenues	298	155	60	n/a
Total expenses	316	116	13	n/a
Contributions Farm operations	(18)	39	47	n/a

NOTE: n/a: not available

EXHIBIT 2-1

HISTORICAL BALANCE SHEET

	Abbotsford Airport			Pitt Meadows Airport		
	1984	1985	1986	1984	1985	1986
ASSETS						
Current assets	$ 62	$ 76	$ 60	$ 29	$ 25	$ 185
Fixed assets less accumulated depreciation	3,765	3,929	4,492	1,388	1,550	3,252
TOTAL ASSETS	$3,827	$4,005	$4,552	$1,417	$1,575	$3,437
LIABILITIES						
Current liabilities	$ 127	$ 143	$ 200	$ 17	$ 211	$ 431
Long-term liabilities	58	58	56	20	19	18
SHAREHOLDERS EQUITY						
Accumulated investment Government of Canada	3,740	3,952	4,704	1,427	1,494	3,231
Retained earnings	(98)	(148)	(408)	(47)	(149)	(243)
TOTAL LIABILITIES AND EQUITY	$3,827	$4,005	$4,552	$1,417	$1,575	$3,437

EXHIBIT 2-2

HISTORICAL INCOME STATEMENT

	Abbotsford Airport			Pitt Meadows Airport		
	1984	1985	1986	1984	1985	1986
REVENUE						
Air transportation	$ 7	$ 4	$ 2	$ -	$ -	$ -
Airfield fees and concessions	82	91	73	44	27	31
Passenger and cargo, fees and rentals	35	37	28	1	-	-
Industrial rentals, leases and concessions	232	301	195	108	92	124
	356	433	298	153	119	155
OPERATING EXPENSES						
Salaries, wages and benefits	47	56	135	23	26	19
Materials and supplies	14	4	3	24	26	20
Purchased services	86	101	102	42	40	39
Depreciation	64	69	76	39	39	38
	211	230	316	128	131	116
CONTRIBUTION FROM OPERATIONS	145	203	(18)	25	(12)	39
RELATED COSTS						
Headquarter and regional overhead	40	48	71	27	28	23
Terminal control costs	-	-	-	-	-	-
Grants in lieu of taxes	203	203	173	45	62	110
	243	251	244	72	90	133
NET PROFIT (LOSS)	(98)	(48)	(262)	(47)	(102)	(94)
OPENING RETAINED EARNINGS	-	(98)	(146)	-	(47)	(149)
CLOSING RETAINED EARNINGS	$ (98)	$(146)	$(408)	$ (47)	$(149)	$(243)

EXHIBIT 2-3

STATEMENT OF CASH FLOW

	Abbotsford Airport			Pitt Meadows Airport		
	1984	1985	1986	1984	1985	1986
SOURCES OF CASH						
Collection of accounts receivable	$ 322	$ 420	$ 340	$ 142	$ 124	$ 161
USES OF CASH						
Salaries, wages and benefits	48	55	132	23	28	19
Payments of accounts payable and holdbacks	402	525	886	168	136	1,855
Headquarter and regional overhead	40	48	71	27	28	23
TOTAL USES	492	632	1,092	219	191	1,898
INCREASE (DECREASE) IN CASH	(170)	(212)	(752)	(77)	(67)	(1,737)
OPENING CASH	(3,570)	(3,740)	(3,952)	(1,350)	(1,427)	(1,494)
CLOSING CASH	$(3,740)	$(3,952)	$(4,704)	$(1,427)	$(1,494)	$(3,231)

THE ASIA PACIFIC INITIATIVE

On December 16, 1986, federal and provincial ministers signed a Memorandum of Understanding (M.O.U.) calling for the coordination of initiatives to enhance British Columbia and Vancouver as Canada's Pacific Centre for trade, commerce and travel. The M.O.U. was later designated as the Asia Pacific Initiative.

On June 2, 1987, the Asia Pacific Initiative Advisory Committee (APIAC) – drawn from the private sector – was established to advise federal and provincial ministers of initiatives that might be undertaken to achieve the objectives of the M.O.U. This advice is transmitted by the APIAC to the federal-provincial Pacific Council of Ministers through a Ministerial Executive Committee that meets regularly with the APIAC.

The APIAC has appointed task forces that are addressing opportunities and advising the Governments of Canada and British Columbia in the areas of international finance, trade, transportation, tourism, cultural and social impact and the export of professional services. More than 100 volunteers from the private sector are engaged in this work.

ASIA PACIFIC INITIATIVE